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Original Articles

CANCER OF THE BREAST *

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The treatment of cancer of the breast still demands the most thorough excision possible. The use, in operable cases, of *x*-rays, toxins, yeasts and ferments, radium and similar methods, is, in my opinion, wholly unjustifiable. There is little if any encouragement that methods will soon be found of sufficient merit to replace the knife. Resort to other treatment than excision takes away the only reasonable chance of permanent cure. I see an appalling number of cases of hopeless cancer, which have become inoperable under methods with some scientific basis, to be sure, but as useless as osteopathy or Christian Science. There is certainly a sufficiently wide field for the trial of non-operative methods without taking the easily operable cases. The layman, however, does not know this: many physicians do not. Between the hopeful layman and the optimistic physician, the period favorable to operation is too often passed, and the unfortunate patient comes to the surgeon too late.

Are these words too strong? Far from it. They are too weak. The injury done the sufferer from cancer by the optimistic reports of cures by such things, for example, as trypsin and amylopsin is inestimable. Moreover, the ridicule heaped on surgeons by certain lay journals, under the pretense of humor, whether in reference to appendicitis or other operations said to be performed for reasons other than for the patient's own good—cheap, ill-advised, and sinister attempts at wit—have resulted, I have no doubt, in thousands of those awful tragedies of hopelessness of which I personally have seen many.

The "fads" of an earnest and honorable profession are, in reality, its sincere desire to save humanity from an only too natural tendency to delay. The watchword of our profession of late years has been early operation, earlier operation, earliest possible operation, until perhaps the public is weary—as it often wearies of good works. But do we not see daily the evils of malignant disease in which the layman's reluctance to operation is fostered by ridicule and the attributing of unworthy motives?

My remarks are based on my own experience, which includes a large number of operations, and a still larger number of hopeless cases. An incomplete search through my records, since 1890, gives 1300 cases of breast tumor of all kinds in my own practice. There were 398 patients operated on for cancer.

The things that I am especially moved to say do not concern much the question of methods of operation, for we have gone as far as we can in thoroughness—in breadth and depth. The glaring need in connection with breast cancer is early recognition. The most important theme for discussion at the present time, therefore, is the diagnosis of breast tumors; the most conspicuous subject for investigation and study is the cause and nature of cancer. But the latter I do not intend here to discuss. I will confine my remarks to the diagnosis, prognosis, and indications for treatment.

My earliest operation consisted in removal of the breast by an elliptical incision extending from the insertion of the pectoralis major to the ensiform cartilage. I dissected free from fascia and fat the pectoralis major, the serratus magnus, the latissimus dorsi, and the subscapularis. The axillary structures were cleaned with the care of a dissecting-room preparation. No muscles were cut or removed unless they were visibly infected.

From year to year I made my dissection more and more thorough. I removed a greater area of skin and carried the dissection of the axilla higher and deeper.

In one case, in June, 1892, I first closed the gap by shifting the skin and opposite breast toward the denuded area. This method I have followed ever since. The breast is removed by not only as much skin as in the so-called tennis-racquet incision, but by even more, for it includes a triangular area between the incisions that meet at the ensiform cartilage. The posterior flap is dissected from the muscles far behind the posterior axillary border. All tissues are removed in one piece, until the fat at the axillary apex is exposed and removed. In thoroughness and detail I have become more and more painstaking, following not so much the trend of surgical practice, perhaps, as the teachings of my own experience, stimulated by early training in the dissecting room. I have, however, nothing new or original to offer. I make my acknowledgments to Halsted, Warren, Meyer, Mixter and a host of other surgeons, especially American surgeons, whose collective experience has done so much to make the surgical treatment of breast cancer effective.

The dissection, as I make it, begins as a broad skin removal. The deeper dissections are still wider and more effective. Of late years I have made the dissections of the veins, arteries, and nerves of the axilla particularly clean and dissecting-room-like, by the use of a curette to remove particles of loose fat.

The wound which results from this operation is always closable by skin: no grafts are necessary. A vast amount of skin can be removed by this method, with a comparatively small area to be covered in by grafts.

The time of this operation is brief. Rarely over thirty minutes: often less. The time depends wholly on the amount of bleeding.

The immediate results in all the cases I have been able to collect, are good. The mortality in all my

* Read before the New York Academy of Medicine, Jan. 19, 1908.

cases is four. The total number of operations for cancer is (since 1890) 398.

The results of operations for breast cancer seem to vary considerably. Certain things must be considered in putting forth statistics, and these things are essential for an approximately just comparison of methods and results.

I do not have as yet my end-results, but I have definite propositions to make for the estimation of end-result values.

So long as cases are grouped properly, end-results may be used properly. So long as they are not thus properly grouped, so long will results be inaccurately weighed. Cases must be judged at the time of operation as favorable, unfavorable, or hopeless, and so forth. Each of these headings permits greater accuracy of subdivision: very favorable or exceedingly favorable, favorable, not positively favorable, doubtfully favorable. For example, a case in which there is a small tumor in the center of a breast with but one or two small lymph nodes involved must be regarded as an early one and especially favorable for permanent cure. A small tumor with many and large axillary lymph nodes, but easily movable and thoroughly dissected, makes a favorable case. A tumor of no matter what size, so long as it can be removed by a wide margin of safety, presents, with trivial or moderate implication of axillary lymph nodes, a favorable outlook.

Cases in which there are infiltrations, whether into the skin or parts near the breast periphery, into axilla with close shaving of axillary vessels, present an unfavorable though perhaps not a hopeless outlook.

Wide infiltrations (the least tendency to *cuirasse* appearances), involvement of ribs or intercostal spaces; implications of axillary vessels; the breaking through of cancer from the lymph nodes into the axillary cellular spaces; make the outlook practically without hope, for in all such cases there must be presumably an incomplete operation.

Every operator of wide experience can not but realize these conditions. In many cases he can not tell beforehand what he is likely to find; in many, he can be reasonably sure. In estimating prognosis, as he must himself acquire the ability fairly to guage it, the surgeon must rely wholly on his own experience. I dare say the prognosis of no two men is exactly alike, but the general principles of prognosis must be about the same in all extensive experiences.

In presenting the practical side of a discussion of breast cancer, I am moved strongly to emphasize the importance of early diagnosis and its influence on the prognosis and the indications for treatment; for the good prognosis of even the most thorough operation is seriously compromised by delay in diagnosis.

The chief cause of delay lies in the patient herself—in her unwillingness, even with her fears strongly excited, to admit even to herself that serious trouble may be present and in her not unnatural reluctance to consult a physician. This prolific source of delay is increased by the lay press, by advertisements of cancer cures, and the like. A campaign directed to the public, such as is being conducted at the Harvard Medical School in its popular lectures, does much toward educating the laity to the importance of all tumors.

A second important cause is the too sure diagnosis of benignancy on the part of the physician of small experience in whom, I think, the wish is father of the thought. Hence the necessity of a campaign directed to the physician, and, for that matter, to the surgeon himself.

In insisting on the education of the family physician in the diagnosis of breast cancer, I can illustrate this necessity too well by the shortcomings of myself—more or less of an expert in cancer—to be afraid of offending the susceptibilities of the physician who, no matter how wide his practice, can not in a single disease like breast cancer ever hope to become an authority on diagnosis. While this manuscript was being prepared in a remote camp on Cape Cod, a native consulted me about himself. His case is typical, not only of cancer of the breast, but of the way in which its serious nature may be treated by an intelligent physician. The patient is a man of seventy-five, a farmer, of good family descent straight through eight generations from the Puritans. More than two years ago he noticed a small lump in the right breast. He thought little of it himself, but showed it to his dentist, a young man who was studying medicine. The dentist told him that it was probably nothing, but that he had better keep watch of it. Soon after this he showed it to the local physician, as he happened to meet him on the road. The physician, a man whom I know well, a man of wide experience and common sense, told him that it was a sort of cartilage tumor and would not amount to anything. As it grew larger and larger, the physician made the same reply—"but have it taken out if you want to." It went on nine months longer, and broke. Then the physician said that it ought to be taken out. I found extensive cancer of the right breast, with implication of the axillary nodes. I was unable to close the great skin gap except by grafting. The operation was done on May 13, 1908. There is now a nodule of recurrence in the skin at the sternal end of the scar, and one in the axilla.

Experiences like this are common. My record books are filled with cases of cancer discovered too late. While in many cases no educated person is responsible for the direful error, in the majority some practicing physician is responsible. The patients are told that they have nothing but a glandular enlargement, an obstructed milk duct, or slight thickening; a little harmless swelling—when they are harboring, in a very accessible organ, and one that may easily be thoroughly removed, the worst enemy of mankind.

But it is not the family physician only who makes such mistakes. I have made the fatal error of calling a malignant breast tumor benign, and I have done it, not once, but half a dozen times, and I have seen the evil results following a wrong diagnosis until I no longer take the responsibility of permitting delay when excision is so simple, so safe, and so effective—no longer, except under certain most unusual conditions of almost incontrovertible evidence.

The evils of wrong diagnosis need not be exemplified here, but the evils of a too-positive opinion do need emphasis, especially those of opinions which, if wrong, sacrifice health, or even life itself. The lethal effects of that opinion, for example, by which a necessary operation is withheld are infinitely more important than those which attend an opinion by which an unnecessary one is imposed. We should, of course, confess to our unnecessary operations; but without fear we should publish, that all may see, the tragedies that follow delayed necessary operations. But do we publish them? I fear that we do not.

Now, whatever may be the nature of cancer, its etiology, its treatment, what—after all—can compare in importance with its early detection? Whether parasitic or not; whether hereditary or not; whether caused by this, that, or the other thing, what gives the patient the best, if not the only chance? Is it not early diagnosis?

The diagnosis of breast tumors seems easy, certain, doubtful, difficult, or impossible, with the provision that in even the plainest case there may be error. Could the diagnosis be unmistakable, the treatment would be unmistakable; but there must always be the possibility of overlooking malignancy. The treatment is clear, if the diagnosis is clear. Discrimination between the case which needs operation and the one which does not is exceedingly liable to error, and it is a differentiation which no man can make without occasional mistake.

The only safe treatment of breast tumors of all kinds, at all ages, is excisio..; for excision is the only treatment which will obviate the awful tragedies of overlooked malignancy.

This rule, which in my experience and belief is applicable to all tumors, admits of certain exceptions. A consideration of these exceptions requires especial emphasis of the diagnosis of breast tumors.

I do not intend at this time to discuss the diagnosis of breast tumors in general, or of cancer in particular, but rather to emphasize those symptoms and signs which lead most frequently to error, and to estimate their weight.

It is not to be expected that we shall often see cases of neoplasm of the breast in which no tumor can be felt; but such cases do come to the surgeon, because of pain or discomfort. It is evident that the prognosis will be enormously bettered if we can make the diagnosis before the tumor is palpable. As the symptoms at this stage are only pain and discomfort, what weight should be given to them? As a predominating rule, pain is not present in cancer. The great majority of patients do not complain of pain in the least In the cases in which the patients do complain of pain, a tumor has usually been discovered. I have seen a few patients who complained of pain alone, in whom I have discovered no tumor whatsoever. Pain then as a diagnostic sign should have little weight; pain as an indication for operation should have only the weight of its own severity, and should justify operation, in the total absence of the breast signs, only for its own relief.

I have here laid down one of the rules by which I myself am guided. Has it exceptions? A few, I think. I give great weight to pain when I can eliminate positively the existence of tumor, when the breast is large, and when there is an indefinable something in it. I am strongly influenced when there is a marked family history of cancer, when a localized area is unduly tender, and always when the axillary lymph nodes are perceptible.

There is also, as a guiding influence, my experience in many cases, and my feeling of doubt and dread when, under a strong suspicion of malignancy, I do not advise operation. I once found an unmistakable nodule of cancer in a large breast in which, before operation, I could feel nothing, but which I removed on account of pain, contrary to my own opinion as to the necessity—urged to the performance by the family physician. To advise against operation in any breast case, especially in patients of cancer age, even if the only symptom is pain, has become, for some reason or other, chiefly I think distrust my own infallibility, so great a responsibility, so full of possibilities of disaster that I am more and more averse to taking it. And this distrust of my own powers of diagnosis increases with increasing experience, until I am forced to the position that no man's experience is adequate to justify the neglect of surgical exploration when the signs point, at the earliest stages, to a possible diagnosis of cancer.

The influence of heredity on a doubtful diagnosis should be great. In a questionable tumor, with no symptoms whatever, but with a family history of two or three cases of cancer, I would not exclude the possibility of beginning cancer on no matter how experienced a touch. Nor would I regard any discomfort in the breast of a woman with such a history except as a probable indication of beginning cancer, clear enough at least to demand exploration.

A word should be said as to the significance of tumors of both breasts. As a rule, cancer in both breasts, occurring independently, is extremely rare. Nevertheless, I have seen this often enough to mar somewhat the positiveness of a diagnosis of benignancy based on the presence of double breast tumors. When one breast has a tumor which seems benign, that benignancy is rendered more probable by a similar tumor in the other breast. Similarly, when a tumor has been removed from one breast, and proved benign, the later occurrence of a similar tumor in the other breast favors very strongly a similar benignancy.

But there should be no rule guiding the surgeon in such cases, unless it be the only safe one in connection with breast tumors—that of treating them all as malignant until they have been proved benign.

The various attributes of the tumor itself—size, shape, situation, mobility, hardness, tenderness—must be given that weight, and that weight only, which the experienced observer has, through many years, been able to estimate, basing his estimation on what he feels before operation, controlled by what he feels after excision; what he sees on gross section, and what the expert reports with his microscope. In this way, the candid and careful observer will be able to make deductions of extraordinary accuracy, from the feel alone of the tumor.

The examination of the axilla is prolific in important evidence for or against cancer. There is a strange variability in the extent of axillary involvement. Sometimes the axilla is filled with masses themselves conspicuously cancerous, when perhaps the breast itself will show so little perceptible involvement that the surgeon will feel obliged to review, or even to change his opinion of a breast's malignancy. At times, as I say, there is much in the axilla and little in the breast; at times there is much in the breast and little in the axilla. As a rule, the presence of perceptible axillary lymph nodes adds an evil significance. Even more serious is the presence of supraclavicular lymph nodes. Sometimes there will be infection of lymph nodes with enlargement, but the nodes themselves will be soft and imperceptible.

The diagnosis dependent on symptoms and signs thus far considered may in a few cases be so doubtful that the surgeon will hesitate somewhat in his opinion. For the same reasons, his prognosis will be doubtful; and, while he may favor in doubtful cases the rule of universal operation, there may be conditions which will forbid, except in the presence of certain malignancy.

In all cases, and particularly in those in which the indications for operations are clear, the surgeon must examine for remote metastases, lest he subject his patient to a useless operation. The weight to be given

symptoms which may be caused by such far-away involvement as brain, liver, or spinal cord, is very great; but, great as it is, this weight must be convincing before a diagnosis of hopelessness is allowed to take away the patient's only chance.

Of all the metastases, the most malign are those of involvement of the cerebrospinal axis. I have seen many of these; and, though most of them are late, some, I have no doubt, were present at the time of operation. Any persistent cerebral or spinal symptom should excite the strongest apprehension.

This fact has recently been illustrated by the case of a young woman with an infiltrating mammary cancer that had been treated so long by osteopathy and Christian Science as to be locally almost inoperable. Spinal symptoms that were marked, though not to the neurologist absolutely significant, added enough to the contraindications to make operation unjustifiable.

But more frequently than anywhere else metastases in the abdomen lend their weight to a doubtful diagnosis. I have twice opened the abdomen in the case of doubtful abdominal tumors, without examining the breasts: in both cases there were extensive cancerous infiltrations, which were metastatic from the breasts, and for which breast cancer had never been suspected.

A persistent cough, without adequate signs in the lungs, always adds strength to the diagnosis, if it weakens the indications for operation.

With reference to the diagnosis by the use of the hollow punch, or the knife section, for the microscope, I believe that a tumor doubtful enough to justify this means of control should *per se* be immediately extirpated, for I am convinced that autoinfection is possible and probable, not only in breast cancer, but in all forms of malignancy.

I have seen a breast and axilla infected the whole length of the puncture with a Mixter punch, just as I have seen sarcoma implanted throughout a fresh area, even to the stitch-holes. I have seen not a few cases of widespread cancerous peritonitis from the fluid of a malignant ovarian cyst. I therefore now remove if possible the ovarian tumor without tapping it.

The prognosis in cancer unoperated on is, of course, as bad as it can be. But the prognosis is measured in accordance with the accuracy of the diagnosis. Every case in which there is the slightest doubt has, therefore, hope in the possibilities of error—hope in human frailty. This hope, when an experienced surgeon makes a diagnosis of cancer, is small, to be sure, but there is still a hope.

Three illustrative cases have recently come to my attention.

In the first there seemed to me an infiltrating cancer of the right breast so advanced in axillary metastasis that I fully expected to find adequate removal impossible and early recurrence certain. The operator, a man of small experience, found a simple fibroma. I have often wondered whether, had I operated in this case, I should not have discovered the nature of the growth in time to save the breast.

In a second case in which I was certain of an infiltrating cancer of the right breast I found, after the most radical operation, a tumor containing pus, without a sign, gross or microscopic, of cancer or other malignancy. I had the comfort, in the case of this woman of 65 years, of a primary union and of a safe removal of malignancy, were the laboratory search in any way inadequate or erroneous.

In a third patient, after removal of the breast, I discovered that the main tumor, which I supposed secondary to an epithelioma of the nipple, was a cyst.

I have seen too many errors of diagnosis to be absolutely sure of any case that presents features in more or less concealment. A scirrhous cancer with ulceration is about as certain as anything can be in diagnosis, is it not? And no man could easily mistake it? But it is not four weeks since I made that diagnosis in a superficial ulcer above the subclavian triangle, with a secondary mass extending into the anterior mediastinum. It was so clear a case of cancer that I had no doubt at all of my opinion. Had the situation been the breast in this patient, an old lady, I do not believe that the diagnosis would have had, in any surgeon's mind, the slightest doubt. Even in an unusual place for primary cancer, there was, as I say, no doubt in my mind or in that of any member of my private staff. I admit that I was dumbfounded and delighted, after a very difficult and exciting removal, to receive Dr. Whitney's report of tuberculosis. The operation was adequate for complete and immediate cure of tuberculosis, and a good attempt for cure of cancer, so that I had no especial regret, but it emphasized to myself my own fallibility in an apparently plain diagnosis of cancer. Even in hopeless breast tumors in which the diagnosis seems sure, we must not forget the hope that lies in error and in the confounding of benign and malignant cases. And the liability increases with the absence of signs visible to the eye. Important as is the feel alone in the diagnosis of deeply placed tumors, that diagnosis is made most certain by the visible dimpling of the skin; the discoloration of overlying tissues; the infiltrating and thickened masses perhaps too little affected to give signs to the touch.

But the prognosis of real cancer, without operation, is, of course, as bad as that of any disease can be. I do not accept any cases of cure under other than thorough excision unless the diagnosis rests on a history, a gross examination, and on microscopic findings that make the diagnosis humanly impregnable. Indeed, one case of mammary cancer cured by *x*-rays, radium, toxins, trypsin, amylopsin, or any method that does not remove utterly the disease, I should regard as one of the most hopeful signs of an ultimate nonoperative and successful treatment.

The prognosis under the most radical methods of operating depends on the operative findings. The experienced operator can tell the cases in which the prognosis is almost surely bad as to recurrence. There are cases in which the operation seems adequate for good hope, but in which the surgeon's instinct makes the outlook decidedly bad. Perhaps his description in words would mean a favorable outlook, but he finds an indescribable something of sinister influence.

The statistics on which prognosis depends are, in my judgment, of little service when they are made up of a large number of cases from many surgeons. The statistics that are worth while in the formation of his own prognosis are those of his own experience. I have, for example, a very definite idea of the prognosis of the breast cancer as diagnosticated and operated on by myself, but a very indefinite one of the same under another surgeon. For example, in my operative cases, I know those in which there is no hope of ultimate cure, and I know those in which, from the operative standpoint, there is every hope of permanent success. When there is a mass of conglomerated lymph

nodes in the axilla, even if there are no perceptible ones at the first rib, I know that my dissection, no matter how painstaking, is probably too late. When I find but one or two nodes in the center of a mass of axillary fat, easily separated on all sides by an extensive and clean dissection, I know the case belongs to a group in which the outlook is bright, in which the per cent. of cures is higher than 25 or 30 per cent. or even 50 per cent.

The prognosis in cases that are recognized early enough to permit the widest removal, is one thing; that in cases in which thorough dissection is doubtful, is another. When the margin of safety is narrow, as when the glands are dissected from the axillary vessels or nerves; or when the least trace of disease is so situated that it can not be freely and widely removed, then I know that there is no hope of permanent cure.

We probably err most frequently in giving a too favorable prognosis, but occasionally we give a prognosis that is worse than the facts justify. At times lymph nodes that we think cancerous are really inflammatory. Cancer is bad enough, but we must seek every favorable sign, and especially that of human fallibility.

The period of immunity after operation.—Is there any good reason for the three-year limit? I do not think there is any limit of years after which a patient may be said to be permanently cured; for I have seen local recurrences many years after the three-year limit —recurrences of such a nature as to show a direct connection between the original disease and the secondary growth. A sternal or rib tumor, appearing five or ten years after the removal of the breast, would seem to me clearly secondary to the breast tumor. Cancer of the remaining breast, several years after removal of the other, without any recurrence on the side first affected, would suggest very strongly, not a metastasis, but a really new and individual focus—just as when each breast contains a small, movable tumor in its center, we regard them as separate and individual foci. The really remote metastases—in time and situation—are those which affect the spine. I have seen a few examples.

The prognosis as to recurrence is influenced, in favorable cases especially, by the thoroughness of extirpation. The advanced cases, particularly the ones in the borderline of the inoperable, have really very little prospect of cure, but that depends entirly on the extent and thoroughness of extirpation. Except for pain and annoying discharges, the prognosis in advanced cases of mammary cancer is such as to forbid operation.

In considering the immediate prognosis, some of us may be unduly influenced by the mortality of preantiseptic days. I look on the most extensive operation for breast cancer—in patients of good strength, good hearts, lungs, and kidneys—as practically free from mortality.

From the views already expressed, the chief indication for operation is the presence of a tumor, whether in the male or the female breast. I have always felt the need of conservatism in advising surgical operations, and have from time to time emphasized the necessity of restraining one's hand from operating in hopeless cases. But what is the one great lesson that we learn with increasing experience? What the one great blot on surgical practice? It is failure through unjustifiable delay. That lesson we can not seem to learn.

We have learned that delay in the extirpation of breast tumors may be attended by appalling consequences. I have learned that no man can with a placid mind advise delay in the treatment of a doubtful breast tumor. Sooner or later he will be put on the defensive; or worse, he will have to answer to an implacable if just conscience why he permittted a breast tumor to develop into hopelessness when a trivial and safe operation was possible. In considering what to advise in the case of a woman—or of a man, for that matter—what to do with even the most trivial breast tumor—the burden of proof that the disease is not malignant is on those who advise palliation.

We who say that all breast tumors should be explored present our exceptions. Those who say that only malignant tumors are to be excised must prove beyond reasonable doubt the effectiveness of their diagnostic methods.

For me, the only exceptions to the rule of universal exploration are those cases of multiple tumors affecting both breasts, which are so unmistakably retention cysts. Another exception is the breast tumor which appears after the removal of a benign growth or a simple cyst. Still another is the appearance in the other breast of a tumor like a benign one that has been removed from the first.

But, barring such contraindications as are found in heart, lungs kidneys, and other organs, and in certain constitutional diseases, a better rule—and one which I can not with contented conscience ever break—is that of removing every tumor—of whatever nature—at any age. Thus only can we avoid those errors, which, however infrequent, are nevertheless, when they do occur, so appalling and indefensible.

[TWO OTHER PAPERS IN THIS SYMPOSIUM ON CANCER OF THE BREAST, BY DRS. F. S. DENNIS, NEW YORK, AND W. L. RODMAN, PHILADELPHIA, WILL APPEAR NEXT WEEK.]

PHARMACOLOGIC FETISHISMS

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The last few years have witnessed a strong and certainly a healthy growth in the spirit of iconoclasm in medical thought. Babinski in neurology,[1] Henri in pathology,[2] and Cushny[3] in pharmacology are notable examples of this spirit. Babinski's efforts have largely succeeded in tearing down many notions with respect to hysteria which for a generation were regarded with almost religious veneration by the apostles of Charcot. Henri has attacked the fallacious ideas from which the pragmatic German school derived its sanction for its top-heavy theories regarding blood pathology and immunity. Finally Cushny in pharmacology has thrown out the fetishes with which the temple of therapeutics was so overcrowded, and allowed room for a healthier devotion to be paid to a rational study of the physiologic action of drugs.

If it were not for these periodical intellectual reformations, the mind of the average physician would be little better equipped than that of his superstitious and empirical prototype of a thousand years ago. In pharmacology the movement appeared none too soon. Like many other reformations, it began many years before it was recognized. A whole generation ago Buchheim and Schmiedeberg began the cultivation of rational pharmacodynamics. They sought to put drug therapeutics, then in a chaotic state, on a scientific basis, and while they did not succeed in solving all of the problems with which they were confronted, they con-

1. Rev. neurol., Nov. 15, 1901, ix, 1074; Confer. Société de l'internat., Bolin Paris, 1905 [1906].
2. Sem. méd., 1907, p. 424.
3. Pharmacology, Philadelphia 1900.

ferred on the medical profession an inestimable blessing by showing the true way by which the application of drugs to disease could be put on a rational plan.

Rich results have already come from these efforts, but it is nevertheless truly surprising that even at the present day many medical men have not seen the light or joined the great propaganda for reform. It is not surprising to see the lay mind bewildered by the glittering shams of charlatanism, but it is difficult to understand how the shallow mockeries of pharmaceutical quackery can gain hold on the professional mind. It is by remedying to a large extent, the tendency to such puerile gullibility on the part of the medical man and by stimulating a healthy degree of scepticism to pharmacotherapy that Cushny has earned the everlasting gratitude of the physician.

The great movement for reform in drug therapy has come to stay until its end is accomplished, and the Council on Pharmacy and Chemistry of the American Medical Association,[4] comprising as it does some of the best pharmacologic talent in the United States and even abroad, will continue its beneficent work. But each physician must clear his own intellectual atmosphere, and it is because this attempt at mental autodetergence has destroyed so many therapeutic household gods, before which I was wont to bow in solemn veneration, that I have taken the liberty of collecting some of the pieces and labeling them "pharmacologic fetishisms."

A pharmacologic fetish is no different from any other in the influence it exerts on the mind of its possessor. He is its slave. It dominates him and only by a tremendous effort can he divest himself of its influence. The physician who believes he can supply phosphorus to the nervous system by means of the hypophosphites or phosphates, that he can increase the coagulability of the blood by the administration of calcium salts, that adrenalin hypodermically or internally given will stimulate the heart and raise the blood pressure is the possessor of a pharmacologic fetish. And it is only by a supreme mental struggle, involving almost an assault on his emotions, that he can be made to relinquish these ideas. The tenacity with which we hold to our false beliefs is a strong psychological argument in favor of inculcating sane and scientific doctrine of all sorts into the student's mind during its formative stage.

In the following account of pharmacologic fetishisms, no attempt at classification will be made, and no effort to arrange them in the order of their importance. I simply call attention to some delusions concerning the uses of familiar drugs and discuss what appears to be a rational critical analysis of the same.

I. OLIVE-OIL AND GALLSTONES

Most of us have, at some time in our medical careers, believed that olive-oil cured cholelithiasis. We do not say that we ever indulged in the lay delusion that olive-oil dissolves gallstones, because this would be to insult the intelligence even of those enthusiasts who are today pouring the oleate of glyceryl into the stomachs of their gallstone patients. But candor requires us all to acknowledge that we actually did believe in the cholagogue virtues of olive-oil. As a matter of fact experimentation has shown that olive-oil has no effect whatever on the secretion of any of the constituents of bile, or bile itself. But even the most cynical and incredulous therapeutist parts with hesitancy and even with sorrow from this fancy with respect to olive oil.

I had a case of gallstones recently, which illustrates the temptation to grasp and hold to this pharmacologic delusion. The case was that of a woman who suffered from repeated attacks of typical biliary colic. The attacks became frequent and severe, and an operation was advised. This was refused, and for several months the patient was not seen by me. About this time I met the patient's husband on the street and in answer to a query as to the patient's condition, he informed me triumphantly that his wife had been cured by olive-oil which had been recommended in tumblerful doses by a lay friend. I confess to a feeling of discomfiture and to the thought that perhaps my skepticism in regard to the oil was perhaps too strong. A month after this, however, I was called to attend her in another severe atack, and this restored my scientific equanimity. The ingestion of olive-oil might fairly be asserted to have relieved the woman for a longer interval than she had previously experienced, between attacks. Olive-oil may give relief in biliary colic as it does likewise in dysentery, and spasmodic gastropyloric disorders, through its emollient properties on stomach and intestine. Its food value must also be recognized; but as to curing gallstones—never. Cholelithiasis is a surgical and not a medical affection.

II. VALERIAN AND HYSTERIA

The pervading odor of this drug, permeating the atmosphere to the utmost confines of his shop, lends to the pharmacist a mysterious and occult power in the mind of the individual whose nostrils are assailed by it as he enters the drug-store. The frequency with which we all encounter it under these circumstances is a sufficient proof of the high esteem in which it is held by the physician. We know when we smell it that some one has had an attack of nerves, and we feel that the patient's nervousness will be driven away soon after the bottle is uncorked. To what does this malodorus substance owe its vaunted efficacy? To its smell, of course, and certainly not to any effects after absorption. Kionka[5] has informed us that it stimulates the psychic functions and the circulation, but these effects are so slight and indefinite that they fade into insignificance in comparison to the one great feature of valerian, namely, its ubiquitous, its penetrating, its disagreeable odor. Since we are limited in the treatment of hysteric states to working on the psyche of the patient, let us make use of a dignified psychotherapy and dispense with the disgusting and superfluous valerian.

III. TANNIC ACID AND INTERNAL HEMORRHAGE

This delusion is not as prevalent as it used to be, but we all remember distinctly when tannic and gallic acid pills were universally given for hematuria, hemoptysis and other varieties of internal bleeding, and a glance at many works on therapeutics, even at the present day, will show that the error is sometimes though not universally perpetuated. A slight knowledge of pharmacodynamics will discover the source as well as the fallacy for this belief in tannic acid. Tannic acid acts as a local hemostatic by precipitating the proteids of the wound. Even in this respect it is inferior to the salts of the heavy metals. The earlier therapeutists, reasoning from analogy, weakest of logical arguments, and without investigating the changes undergone by the drug in the process of absorption, concluded that the acid would act on a bleeding part

4. New and Nonofficial Remedies, 1909, Chicago.
5. Arch. internat. de pharmacod., xiii, 215.

situated within the body. It remained for modern pharmacologic investigation to show that tannic acid is decomposed in the intestine into gallic acid, absorbed as a non-astringent, and gallate of sodium, 99 per cent. of which is completely oxidized in the tissues. As for gallic acid, this substance is quite devoid of astringent property even when locally applied.

IV. ALCOHOL AND ETHER HYPODERMICALLY INJECTED IN SHOCK AND COLLAPSE

In considering this particular species of pharmacologic fetishism we encounter a harmful delusion. Both alcohol and ether after absorption act as cardiac and respiratory depressants. It is possible—nay, probable—that their internal administration may temporarily increase the activity of the medullary centers reflexly, but after absorption their effect is the opposite. In experimental shock alcohol has been found to increase the danger (Crile), while ether injected hypodermically, has been found without effect on the heart or blood pressure (Elfstrand). From these considerations it results that the treatment is either without value or harmful.

V. COLCHICUM AND GOUT

To state that colchicum cures gout is to utter a widely disseminated and influential belief. Let us put the matter in the form of a syllogism to see what we mean. Colchicum cures the gout. Gout is a diseased condition, the pathology of which is so obscure that no rational treatment has been found. Therefore colchicum cures a disease of which the pathology is so obscure that no rational treatment can be found. This is not a *reductio ad absurdum*, because many well-known diseases were curable before their pathology was known. But gout is a syndrone and not a disease, and its very diagnosis and description are vague and uncertain. The question to solve will be, therefore, whether colchicum cures those conditions which are known by the name of gout. Judging from the extent to which the drug is used, and to the fact that very few books fail to include it, one would naturally be inclined to answer the question in the affirmative. We have two methods of solving the problem. One is an appeal to the clinicians. The other is an investigation of the properties of the drug. The first method results, as so often it does, in chaos. Many use it. Many have abandoned it. It may be fairly stated that it is not used as extensively as it was ten or even five years ago. Something has shaken confidence in it. This something is the application of the second method above referred to, namely, an appeal to the drug itself. Colchicum contains two alkaloids which differ from the alkaloids generally in having an acid reaction. Chemically they are related to pyridin. The symptoms induced by colchicum in poisonous doses do not come on until some hours after its administration and they are the same whether the drug is given by mouth or hypodermically. The symptoms refer to the alimentary canal. In this we are somewhat reminded of phosphorus and arsenic. But here the similarity stops because colchicum possesses none of the effects on the metabolism which characterize these metalloids. The symptoms produced by colchicum are those of a gastrointestinal irritant. In medicinal doses the effects are of course much milder in degree but similar in kind. There is no effect on metabolism, circulation or central nervous system. Colchicum is therefore a gastrointestinal irritant, and on this action its therapeutic efficacy must depend. This simple pharmacologic information robs colchicum of any mystery. It is no better nor any worse than other gastrointestinal irritants in appropriate doses. The whole class of vegetable purgatives and calomel might well enter the lists in rivalry for the exalted position held by the meadow saffron. It is useless to speculate on the influence of colchicum on uric acid excretion, because in the first place the results are inconstant or discordant and in the second place it is now recognized that gout and disordered uric acid metabolism are not synonymous terms. Colchicum may therefore be placed in that large and ever growing class of drugs of doubtful or uncertain utility.

VI. THE ANILIN DYES AS TISSUE ANTISEPTICS

The idea of administering the pyoctanins originated with the assumption that these dyes have a special affinity for the protoplasm of the microbes. The use of methylene blue in gonorrhea is the last surviving relic of what was termed chromotherapeutics. It is fast passing into oblivion and requires but a passing notice.

VII. EPINEPHRIN HYPODERMICALLY AS A HEART STIMULANT

I am aware that war will be waged on the individual who classes this among the pharmacologic delusions; for is it not written in many text-books and preached from many rostrums that adrenalin chlorid solution hypodermically injected is a sovereign method of raising the blood pressure and producing cardiac stimulation? Those who hold to this particular fetish do so with great tenacity. It may be stated at once that the only question involved is the method of administration. There is no question as to the action of adrenalin after its intravenous injection, but it seems that in order to elicit the typical vasoconstriction the drug must be introduced directly into the circulation. A very small dose is then sufficient. When given hypodermically the amino-pyrocatechine on which the action depends is oxidized in the tissues and none of it reaches the general circulation. Wiggers[6] recently published an account of some experiments on dogs in which he asserts that the action on the blood pressure was elicited in these animals on deep intramuscular injections.

The following experiment, copied after Dixon,[7] is one which I have performed before my students at Georgetown College. The blood pressure is taken from the right arm by means of a mercury manometer and the exact point where the pulse is no longer felt is obtained. Eight drops of a 1:1000 solution of adrenalin chlorid are injected deeply into the deltoid muscle of the left arm. Absolutely no rise of pressure is indicated in the manometer. There are some subjective symptoms, as pain at the site of injection, muscular weakness, slight abdominal pain and cephalalgia all of which are reflex or at least not due to general vasoconstriction. The consensus of opinion among pharmacologists to-day is that, in order to elicit the blood-pressure-raising effect of epinephrin the drug must be directly injected into the blood vessels.

VIII. POTASSIUM IODID IN SCLEROSES

Potassium iodid very justly deserves the high place which it occupies in pharmacology. But even the iodid is not omnipotent. The success achieved from potassium iodid in removing gummata, which action is attested by all, gave rise to the assumption that the drug pos-

6. Wiggers, Carl J.: Arch. Int. Med., March 15, 1909, iii, 139.
7. Lancet, London 1906, i, 826.

sessed mysterious powers of removing pathologic conditions of a widely different nature. Among these were serous effusion and connective tissue hypertrophy. Arteriosclerosis, being accompanied by connective tissue hypertrophy in the vessel wall, was soon included. Not all of these conditions, however, are curable by the iodid treatment. The drug has no effect on the heart, pulse or blood pressure, and there are no pharmacologic data on which to base its use in the above diseases. Finally clinicians are by no means united in its favor. The real indication for potassium iodid in scleroses is syphilis. In the absence of this it is without value.

IX. CHLORATE OF POTASSIUM AND STOMATITIS

Here again the principal fallacy lies in the method of administration. Internally administered for its action after absorption, potassium chlorate is objectionable on two grounds: First, it is toxic; second, it is valueless. The local action of potassium chlorate in the mouth is a simple salt action and may be imitated by other salts such as the chlorids, nitrates, and bromids. Yet this delusion influences many medical men, who believe chlorate of potassium a mysterious specific for all sorts of mouth diseases attended by ulceration.

X. THE HYPOPHOSPHITES IN NEURASTHENIA

This particular delusion has made many millionaires but never effected a cure. I quote Cushny's Pharmacology (page 530): "The hypophosphites have been used in therapeutics in the belief that they had some special influence on nutrition. They were formerly supposed to be oxidized in the tissues, to phosphates, but this has been shown to be incorrect, as practically the whole of the hypophosphite administered can be recovered unchanged from the urine. There is no ground to suppose that they have any further action on the nutrition than other indifferent salts such as the chlorids. The chief effect of the hypophosphite of iron is due to the metallic ion." A closely related, but equally fallacious idea is that the phosphates are beneficial in neurasthenia and cachectic states. It is supposed that they supply phosphates to the tissues. Experimental investigations have shown, however, that the tissues are entirely unable to build up phosphorus compounds from the inorganic phosphates.

XI. LITHIUM SALTS AND THE URIC ACID DIATHESIS

How lithium ever obtained its tremendous vogue with medical men is one of the great mysteries of pharmacology. Now that its influence is slowly fading into well-merited oblivion, we may profit by the experience and cultivate a more critical attitude toward the subtile sophistries of the pharmaceutical chemist. Not only is the present-day physician losing faith in the drug, but he is extremely suspicious that his confidence has been betrayed with respect to the very existence of the uric acid diathesis. He has been taught to fire, as it were, with imaginary guns at an imaginary enemy. The chief effects of lithium are exercised on the alimentary tract, gastroenteritis and blood extravasations being induced in animals by its subcutaneous or intravenous injections. In this it reminds one somewhat of the heavy metals and alkaline-earths. Some of the lithium is excreted by the bowel and this perhaps accounts for its effect. Lithium is used generally as carbonate, and consequently the effects of the alkalies is added to that of the lithium. At one time it was supposed that the hydrates and carbonates of the alkaline metals increased oxidation of the tissues, and therefore affected metabolism. But this has been shown by laborious investigations to be entirely devoid of any foundation in fact. Lithium was at one time supposed to form a soluble urate with uric acid in the tissues, but apart from the fact that such a combination could be of no use in therapeutics, the lithium salts have never been shown to affect the reaction of the blood unless in toxic quantities. The opinion of pharmacologists at the present time is that the salts of lithium are entirely superfluous. I scarcely need mention piperazin, quinic acid and other so-called specifics for uric acid diathesis, as they are properly undergoing, if they have not undergone, a well-merited extinction.

XII. CALCIUM SALTS IN INTERNAL HEMORRHAGE

The salts of calcium are supposed by many physicans—perhaps a majority—to increase the coagulability of the blood. As a matter of fact, they have no influence on coagulation time (Robertson, Ilman, Duncan[8]). Nor is it quite clear from a pharmacologic standpoint why they should ever have been expected to do so. Almost all of the calcium taken internally is passed through the bowel unchanged, owing to its extreme insolubility and impermeability. Then, too, it should be remembered that there is almost never any deficiency of calcium in the adult tissues. Treating with calcium internal hemorrhages in which the coagulability of blood is not reduced seems the height of folly. The calcium ion is useless in therapeutics.

The above are not the only pharmacologic delusions which deserve the name of fetish. There are others too numerous to mention in detail, such for example as the use of turpentine in phosphorus poisoning, ferric hydrate and magnesia in arsenic poisoning, alcohol in snake-bite, nitroglycerin as a heart stimulant in anesthetic accidents and shock, etc. My object is not to attempt to belittle our knowledge of pharmacotherapy, but to offer a humble plea for the application of the same critical analysis and scientific examination of the alleged facts in matters pertaining to treatment by drugs, as characterizes the physician in his attitude towards the other branches of the science of medicine.

TUBERCULOSIS OF THE KIDNEY

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In reviewing the history of the various diseases, we find that our knowledge concerning them has not always advanced in a steady progressive manner but has been marked by periods of great activity followed by longer or shorter intervals of comparative quiescence.

During the past few years our knowledge concerning the particular disease under consideration, namely, tuberculosis of the kidney, has made most remarkable advancements and the chief factors which have brought this about are two: first, the discovery and perfection of the cystoscope, which lent such an impetus to the study of the diseases of the urinary organs in general; and, second, frequent and early operations on the kidneys, which have enabled us to study the actual pathology of the living. While these factors are undoubtedly the means by which the advancement in our knowledge was attained, the real fundamental feature of the knowledge consisted in the recognition of the fact that what for years had been looked on as a truth was a fallacy.

How often it is found that the elimination of an

8. THE JOURNAL A. M. A., May 16, 1908, l, 1683.

error contributes more to real knowledge than the discovery of a new truth! For years the profession had been taught and had believed that tuberculosis of the kidneys was secondary to tuberculosis of some portion of the lower urinary or genital tract and therefore due to an ascending infection. Guyon, one of the greatest teachers of genitourinary surgery of this period and one whose influence was felt perhaps more widely than that of any other teacher, is quoted as stating in his lectures that a primary unilateral tuberculosis of the kidney was unknown in which there did not exist at the same time a similar lesion of the bladder, seminal vesicals or other organs.

The reason for the firm and wide-spread belief in the ascending origin of kidney tuberculosis is not difficult to understand. It lies in the fact that an autopsy—practically the only opportunity afforded for inspecting the parts—always disclosed a coexisting tuberculosis of some portion of the lower genitourinary tract and owing to the order in which the symptoms usually appeared during life it was inferred that the lower lesions necessarily antedated the higher.

It is no wonder then, that during all these years, the treatment of tuberculosis of the kidney, based as it was on an erroneous theory, made little or no progress and was a sad tale to relate. But what a change came over the scene on the introduction into practice of the cystoscope! By its use, it was soon discovered that the early bladder symptoms were not due to disease of that organ; the pus and blood in the urine came not from the bladder but from the kidney; and by catheterizing the ureters or by the use of the segregator, it was further found that these pathologic products came not from both kidneys but usually from only one.

A great truth then dawned on the surgeon. He realized for the first time that tuberculosis of the kidney was not a secondary, ascending infection from the lower tract but primarily an unilateral hematogenous infection of the kidney itself; and this fact was demonstrated beyond controversy by the early removal of such infected kidneys by the surgeon, thus affording an opportunity to study the pathology of the living.

PATHOLOGY OF RENAL TUBERCULOSIS

The study of the removed kidneys, together with the experimental work on animals, have given us a very good insight into the pathogenesis and the pathologic anatomy of this condition.

It should be understood that the word "primary," in this connection, refers only to the urinary tract and not to the body as a whole, for the bacilli must be in the blood before they can lodge in the kidney; and there likewise must be an atrium in the body through which the bacilli gain entrance to the blood.

Tubercle bacilli are frequently present in the circulating blood. This is shown by the very common occurrence of tuberculous foci in the bones, in locations inaccessible to the bacilli, except through the blood current, and also by the fact that tubercle bacilli, if looked for thoroughly enough, may be found in the urine in a large percentage of, if not in all, cases of active tuberculosis of the lungs or other organs, and in the absence of demonstrable lesions of the kidneys themselves or of other portions of the urinary tract.[1] This is a fact not sufficiently appreciated.

The presence of these bacilli in the blood and their elimination by the kidneys make it possible for them to lodge and develop in these organs at any time, under certain suitable determining causes. Orth[2] has clearly shown the influence of trauma to the kidney in determining the localization of bacilli circulating in the blood.

Should the bacilli in the blood be quite numerous and exist comparatively singly they may be widely disseminated throughout the kidney, particularly the cortex, giving rise to the ordinary form of miliary tuberculosis; but this is not the form commonly seen nor the one here under discussion. In the usual form, the bacillary emboli are few and there may be only one.

The smaller ones lodge in the capillaries between the tubules giving rise to typical tubercles which undergo the usual caseous changes. I have seen typical giant cells developing in the walls of the smaller blood vessels and giving rise to such a proliferation of the intima as to lead to an occlusion of the vessel lumen.

Some of the larger emboli may lodge in the larger vessels of the medulla of the pyramids, producing typical ischemic infarcts which undergo disintegration with the formation of small tuberculous cavities. Two or more of these small cavities may coalesce, thus forming larger cavities which sooner or later open into the pelvis of the kidney or occasionally on the surface of the kidney, into the perirenal tissue with the formation of perirenal abscesses. These cavities are lined with the usual granulation tissue studded with tubercles and are surrounded by round-cell infiltration and beyond this by an area of interstitial nephritis.

When small emboli lodge in the vessels of the papillæ near the surface, the surface epithelium is lost by disintegration, leaving behind small ulcers which always bleed slightly and at times quite profusely. The bacilli which are constantly thrown off from the surfaces of the cavities and from the ulcers mix with the urine and in descending, infect the mucosa of the pelvis, the ureter and eventually the bladder.

The process in the kidney usually progresses steadily until the secreting portion of the organ is practically destroyed, leaving a mass of irregular tuberculous abscess cavities with walls of varying thickness and all surrounded by dense hyperplastic perirenal tissues.

While the changes above described are those commonly found in tuberculosis of the kidney, we occasionally encounter cases in which the lesions differ from these sufficiently to warrant separate mention. In place of there being multiple foci scattered throughout the organ, there may be but a single focus, perhaps of considerable size, which is then commonly called a large solitary tubercle. The area involved has the appearance of an ischemic infarct and is quite sharply demarcated.

In a kidney of this kind which I removed from a young woman of about twenty-four years, the area involved occupied about one-third of the kidney substance. It was light yellowish in color, rather firm in consistence and so large that it was easily palpated through the intact abdominal wall and was diagnosed, previous to removal, as a kidney tumor on account of the absence of pus and tubercle bacilli from the urine. Microscopic examination showed that the cellular elements had undergone such complete coagulation necrosis with fragmentation of nuclei that the entire area was simply granular detritis. The most important feature of this case is that in the kidney capsule, remote from the area

1. Willson, Robert N., and Rosenberger, Randle C.: The Duration of the Actively Infective Stage of Tuberculosis, THE JOURNAL A. M. A., Feb. 6, 1909, liii, 449.

2. Deutsch. med. Wchnschr., 1907, No. 18.

itself, were found characteristic microscopic tubercles, again illustrating the fact that resection of a portion of a kidney, even in the presence of a so-called solitary tubercle, is as a rule an unjustifiable operation.

Another form worthy of mention is that in which the chief changes consist in an extensive hyperplasia of the interstitial connective tissue with marked destruction of the glandular elements, so that the whole kidney becomes so atrophied as to leave but a small, practically functionless organ.

I will mention only one other form which, though rare, is of importance on account of its deceptive appearance.

The whole organ becomes infiltrated with tubercles, which are so close together and so numerous that, as they undergo caseation, practically the entire kidney becomes converted into a caseous mass with little if any change in form or size. An instructive case of this kind came under my observation a short time ago.

CASE 1.—The patient, a woman of 35, had had an abscess of the right kidney opened and drained about five years before. She recovered with closure of the wound, and, although her general health remained quite good, she continued to have a slight amount of pus in the urine and complained a great deal of pain in the left kidney. The left kidney was easily palpable, could be distinctly outlined in form and size and was freely movable to the second degree. The right kidney was also palpable and somewhat enlarged. Repeated segregations of the urine always led to the same result, namely, no urine whatever from the left kidney but all of it from the right side. This was very puzzling on account of the distinctness with which the left kidney could be felt. She repeatedly asked me to operate on her to see if she could not get relief from the almost constant and annoying pain which she had in the left kidney, but I declined on account of her crippled right kidney. Finally, I yielded to her importuning and cut down on the left kidney. The organ presented a most deceptive appearance. It was practically normal in size and shape, yet the lower pole contained a large tuberculous cyst, while the remainder of the organ consisted of a caseous mass in which, even on microscopic examination, scarcely a trace of cellular elements could be found.

Complete anuria followed the operation and death occurred on the fourth day. At the autopsy numerous tuberculous foci were found in the right kidney and on microscopic examination the secreting cells had undergone acute coagulation necrosis with beginning disintegration.

DIAGNOSIS

Before the pathology of tuberculosis of the urinary tract was understood, tuberculosis of the kidney was seldom diagnosed in the early stages. One of the principal reasons for this lies in the fact that in the majority of the cases of this affection, the earliest symptoms are referred, not to the kidney, but to the bladder; and this fact is what lent such support to the belief, formerly held, in the ascending origin of kidney tuberculosis.

The natural tendency in medicine for one to look to the organ presenting the symptoms for the seat of the disease is so strong that the fact is frequently overlooked that the real lesion may be remote from the apparent one; and in no part of the body is this fact more frequently or more forcefully illustrated than in the urinary tract. This natural tendency is, I believe, the greatest stumbling-block in the way of an early recognition of a tuberculous kidney.

Frequent and painful or harassing urination, the most common initial symptom of renal tuberculosis, immediately suggests to the average observer a cystitis or inflammation of the bladder; yet if there is one thing more than another which the use of the cystoscope has taught us, it is that no diagnosis of an apparent affection of the bladder is complete until the interior of that organ has been thoroughly inspected and the presence or absence of actual lesions verified.

I wish it were possible for me to say something that would impress on the mind of every physician, in a manner never to be forgotten, the fact that a simple diagnosis of cystitis means little more than does a diagnosis of "fever" or of "cough." The diagnosis of cystitis is never complete until the cause of the trouble is discovered. Cystitis is practically never of spontaneous origin. It is always due to something else and it is this something else that constitutes the real trouble which is to be determined.

If there is one fact above another which I desire to emphasize here, it is that the symptoms above mentioned, coming on gradually in youth or early adult life, without apparent cause, should excite in the mind of the attending physician, not only the possibility but the great probability that they are due to tuberculosis of the kidney. In the beginning, the symptoms may be slight and inconspicuous, particularly in young women in whom they are frequently referred to leucorrhea or to some uterine disturbance and little heed paid to them.

Every case of this kind demands the most careful inquiry into the history concerning the possibility of an acquired tuberculous infection and search should be made for active or latent tuberculous foci somewhere in the body.

The bladder symptoms in the early stages of such cases are the so-called irradiation symptoms of a kidney lesion and are not due to direct involvement of the bladder itself, but it should be remembered that sooner or later the tuberculous process extends to and involves the bladder, when the irradiation symptoms pass insensibly into those of a distinct bladder lesion.

From the symptoms alone, it may be impossible to decide whether they are due to a kidney lesion or to actual bladder involvement and the only way in which this point can be determined is by an inspection of the interior of the bladder.

To attempt to diagnose a case of this kind without the use of the cystoscope would be on a par with an attempt to diagnose a condition of the throat without inspecting it.

By means of the cystoscope, the location of the trouble can usually be determined at once, at least in so far as the involvement or non-involvement of the bladder is concerned.

After the seat of the disease has been located, the decision as to whether it is tuberculous or not rests chiefly on the urinary findings, the only positive evidence being the presence of the tubercle bacillus; yet the expert cystoscopist is frequently able to say with considerable precision, from the appearance of the lesions alone whether they are or are not of a tuberculous nature.

In the vast majority of the cases of tuberculosis of the kidney the urine is altered in its chemical and physical properties.

Coincidentally with the appearance of the irradiation symptoms there is usually a polyuria and whenever the process involves the pelvis of the kidney or is in communication with the pelvis directly or through the

tubules, pus and blood are to be seen with the microscope and frequently with the naked eye, while proper tests show the presence of a variable amount of albumin.

Notwithstanding the fact that the continued presence of pus with perhaps some blood in a urine which is markedly and persistently acid, is strong presumptive evidence of the tuberculous nature of the trouble, still the actual proof consists in the finding of the tubercle bacillus as previously stated. Ekehorn[3] says that large masses or colonies of tubercle bacilli in urine indicate origin in the kidney, as such masses do not come from the bladder or ureter; also that a large amount of pus with a small number of tubercle bacilli speaks for an old cavity with sclerotic walls, while inconsiderable amounts of pus with numerous bacilli exclude extensive breaking-down of the kidney.

It is a common observation that the examination of the urine for the bacilli is too superficial. They may be present only in small numbers and it may be necessary to collect and centrifuge large amounts of urine and to make repeated examinations of the sediment before a single bacillus is found; but when they are present, perseverance is almost certain to be rewarded, particularly in the early stages and it is in the obscure and doubtful cases that perseverance is so necessary. The smegma bacillus is best excluded by taking the urine by catheter under proper precautions. Goldberg[4] holds that a spontaneous severe pyuria, gonorrhea excluded, is to be considered tuberculous even when tubercle bacilli can not be found if the urine, drawn with a sterile catheter, shows no growth on gelatin or agar. Luxardo[5] has emphasized the necessity of examining fresh urine, as in old urine the tubercle bacilli may be so overgrown with other organisms as to be less readily recognized. Next to the bladder symptoms mentioned, the most frequent initial symptom is hematuria.

The blood may be present in almost any amount, from a comparatively few red blood cells recognizable only under the microscope to enough to give the urine a distinctly bloody appearance. Occasionally the initial hemorrhage is quite severe and may appear suddenly without apparent cause and in otherwise apparently healthy individuals, as has been described by Tuffier.

When hematuria once appears, it is likely to persist in greater or lesser degree, at least during the earlier stages when it is much more common than it is during the later stages.

Pus and blood exist in the urine usually in inverse ratio; in other words, when there is a great deal of pus, there is but little blood; and when the bleeding is profuse, there is likely to be but little if any pus.

In a minority of the cases, the initial symptoms are not referred to the bladder but present themselves as an indistinct aching or an indefinite uncomfortable feeling or slight pain in the region of the kidney. These sensations continue with periods of varing intensity, occasionally interspersed with a sudden, more or less severe, acute pain shooting into the back or down along the course of the ureter.

In a majority of these cases, the urinary findings above mentioned will be present; but one occasionally meets a rare case in which the urine is apparently normal, owing to the fact that the lesion in the kidney does not in any way communicate with the pelvis. I recently saw a patient with such a lesion, from whom the kidney was removed by my colleague, Dr. Hessert, at the Alexian Brothers' Hospital. The urine showed no abnormal constituents, yet in the kidney was a large tuberculous focus, occupying one pole of the organ but not communicating with the pelvis.

When a diagnosis of tuberculosis of the kidney has been made it becomes necessary to determine which organ is involved, for as already stated, the condition is primarily unilateral.

This is done by collecting the urines from the two kidneys separately, either by means of ureteral catheterization or by the use of the segregator. The information obtained from comparative analysis of the separated urines is of inestimable value from a prognostic as well as from a diagnostic viewpoint.

The technic of ureteral catheterization and of urine segregation, together with the inferences which may be deduced from an examination of the urines thus collected, are foreign to the subject of this paper and will therefore not be discussed here, nor will further space be taken up in detailing the symptoms of advanced cases which are so familiar to all.

TREATMENT

The hope of successful treatment depends largely on an early diagnosis, therefore it is to the early symptoms that particular attention is directed. I can not too strongly urge the necessity of investigating most carefully every case presenting any of the above mentioned symptoms until the presence of tuberculosis is either confirmed or excluded.

In considering the treatment of tuberculosis of the kidney, I wish to subdivide the cases into three groups.

1. Those in which a very early diagnosis has been made and in which the symptoms are slight.

2. Those in which the condition is well defined but the process still limited to one kidney with or without involvement of the bladder.

3. Those in which both kidneys are involved.

It will conduce somewhat to clearness to divert slightly from this order and take up the second group first.

In this class, an examination of the separated urines shows one kidney decidedly tuberculous and the other practically normal. If the condition has existed very long, the bladder may show more or less involvement about the ureteral opening; or the opening may be swollen and pouting without further lesions in the bladder.

The treatment of this group of cases has become quite definitely established and consists, when no contraindication exists, in complete nephrectomy. This operation removes at once the active tuberculous focus from the body; and it is often remarkable how quickly the general health of the patient is recovered after the removal of the infected area. Even when the bladder is distinctly involved, it is found that these lesions improve and frequently disappear entirely, as the constant reinfection through the urine ceases by reason of the removal of the diseased kidney above.

When it was recognized that a single tuberculous focus might be present in the kidney, the thought suggested itself of resecting that portion of the kidney and saving the remainder and this operation was done a few times. Experience, however, soon demonstrated that it was impossible to tell whether that portion of the kidney left did not contain other foci; and even in the

3. Arch. f. klin. Chir., 1907, lxxxiv.
4. Centralbl. f. inn. Med., 1907, No. 16.
5. Reported in Hildebrand's Jahresb. u. d. Geb. d. Chir., 1908.

presence of a so-called solitary tubercle, it was shown that small microscopic tubercles might be present, remote from the large focus, as in my own case above mentioned.

The results of resection, therefore, were not good and the operation has been practically abandoned. Delbet[6] and De Paoli[7] have recently again called attention to the dangers of resection in these cases.

At the present time then, we may look on complete nephrectomy as the normal treatment in this class of cases.

Returning now to the first group of cases, or those in which a very early diagnosis has been made and the symptoms are slight, the question at once presents itself whether, if nephrectomy is the proper treatment for tuberculosis of the kidney, it should be resorted to in all cases just as soon as a diagnosis is made, even though the trouble be slight. This at once raises another question, namely: Is it possible for a tuberculous lesion of the kidney to heal?

That tuberculous lesions elsewhere in the body may and very frequently do heal is of course well known; and I think I may state it as a fact without entering into a lengthy discussion of the evidence at hand, that the same thing may occur in the kidney, although it is freely admitted that it occurs very rarely here as compared to some other organs, the lungs for instance.

Clinical experience, as well as the finding of an occasional scar of a healed lesion in a kidney, I think bears out this statement.

I now have under observation a young woman in whom I diagnosed a tuberculosis of the left kidney four years ago. The symptoms were mild but under suitable climatic and general conditions, complete symptomatic recovery has taken place including a disappearance of the tubercle bacilli from the urine. She now is a strong healthy young woman.

I am of the opinion then, that in certain selected cases, a reasonable time may be spent in suitable hygienic, general and specific treatment before resorting to nephrectomy.

If the patient improves, well and good, but if after a reasonable time no improvement be noted or if the symptoms increase in spite of the treatment, no further delay should be tolerated but nephrectomy performed at once.

We now come to the third group or those cases in which both kidneys are involved.

The problem in these cases is entirely different from that in the other two groups. Both kidneys are involved, and it is of course impossible to do a double nephrectomy. These cases have been considered by most operators therefore as unsuitable for operation. I am convinced, however, that this view of the subject is, with certain restrictions, erroneous. Changes in the second kidney are of two kinds: Those due presumably to the effects of toxic agents and those due to direct tubercular infection. Albarran has classified the first variety clinically as follows:

A. Slight albuminuria which gradually diminishes and disappears after nephrectomy.

B. Albuminuria with or without polyuria and cylindruria persisting for several years even after nephrectomy.

C. Parenchymatous nephritis with slow or rapid development.

D. Hemorrhagic nephritis.

E. Simple cylindruria.

He says that nephrectomy may be done in the presence of simple albuminuria without danger but should be interdicted when the albuminuria is a forerunner of a severe nephritis.

I believe that almost every case in which one kidney has been badly affected for any length of time will show some of the clinical evidences just mentioned of injury to the opposite kidney; but I agree with Albarran that nephrectomy is not contraindicated in their presence, except when the kidney shows distinct evidences of a severe nephritis.

It is, however, particularly to the second variety or those cases in which the second kidney shows evidence of tuberculous infection that I wish to direct attention. Operation in these cases has been heretofore practically interdicted. I believe that in certain of these cases, properly selected, operation may be done not only with improvement but even recovery to the patient. We recognize that tuberculosis of the kidney is primarily a unilateral affection and that the second kidney becomes involved at some later period. There must be a time then when the second kidney is but slightly involved however badly affected the first kidney may be. If we can recognize the cases at this stage I maintain that the second kidney stands a much better chance of overcoming its slight infection and thus healing if the more extensively involved kidney be removed. In support of this statement, I wish to mention briefly the following cases:

CASE 2.—In 1901, Mrs. M., aged 37, applied to me, having suffered for more than a year. She was greatly emaciated, almost bedfast, ran a constantly high temperature; suffered severe pain in the left side of abdomen; distressing frequent micturition, etc. A large irregular tender mass was easily palpable in the region of the left kidney. A diagnosis of tuberculosis of the kidney was made without difficulty. Repeated examinations of the separated urines showed that both kidneys were affected, although there was no difficulty in recognizing that the left kidney was much the worse. On account of the bilateral involvement I declined to operate and she left me. She soon returned, however, and earnestly begged me to do something for her, as her sufferings made her life unbearable. After giving her the most unafavorable prognosis possible, I removed the left kidney. The organ was almost entirely destroyed with large tuberculous abscesses, etc. After a few days of precarious existence she began to improve. The urine from the right kidney showed the same changes as before the operation, but steadily improved so that at the end of six months it had entirely cleared up with the exception of containing albumin. The patient regained her health quite rapidly and was able to resume all her duties. She is still living, eight years after the operation. She weighs 175 pounds and is perfectly well. Her urine contains no formed elements but has now and has had all the time from 0.5 to 1 per cent. of albumin by the Esbach method.

CASE 3.—Mr. S., aged 25, tailor on the bench, applied to me in June, 1906. He had suffered many months until he was obliged to give up work; had lost much in weight and strength and had constant hectic fever, pain in the left kidney and bladder, distressing urination, etc. The diagnosis was tuberculosis of the kidney. Cystoscopic examination showed incipient involvement of bladder about left ureter. Separated urines showed pus and tubercle bacilli in both specimens, much more in the left. Analysis showed the left kidney doing the great bulk of the work. The left kidney was removed and found largely destroyed by tuberculosis. Following the operation the patient received tuberculin treatment, based on opsonic index

6. Ann. d. mal. d. org. genito-urin., 1907, No. 12.
7. Report in Hildebrand's Jahresb. a. d. Geb. d. Chir., 1908.

and Rovsing's carbolic acid treatment of bladder. His general and local symptoms improved slowly and he was able to resume his work. Now, nearly three years after the operation, he is working steadily at his trade and, although he has symptomatically recovered, his urine still shows a slight amount of pus and some albumin.

CASE 4.—Mrs. B., aged 30, applied to me in August, 1906. She had been suffering for about a year with the usual symptoms. Her weight was 99 pounds, average weight for previous five years 120 pounds. The bladder showed considerable redness, swelling and pouting about right ureter; very slight changes about left ureter. Separated urines showed much pus, some blood and tubercle bacilli from right side. There was a slight amount of pus and a few tubercle bacilli from the left side. The amount of urine obtained in a given time and its analysis showed that the left kidney was doing fully 75 per cent. of the amount of work. The right kidney was distinctly enlarged and irregular. A diagnosis of tuberculosis of both kidneys was made, the left being but slightly affected. After the condition was explained to the patient and her husband, both of whom were very intelligent people, they agreed to the removal of the right kidney, which I consequently did, and found the usual changes of multiple tuberculous foci and abscesses. She recovered and returned to her home in one of the southeastern states. Reports from her as to her subsequent history show that during the first year the urine contained a small amount of pus and extra exertion always caused more or less blood to appear, but this gradually improved and after the first year disappeared. She lived out of doors a great deal and forced the nourishment so that by November, 1907, her weight was 145 pounds—many pounds more than she had ever weighed before. She lost some of this, however, but maintains her usual standard weight. Following exhaustion or cold, she has some pain in the left kidney, but this is not frequent and scarcely ever happens when she feels well. Her general health and local symptoms have so materially improved that I can account for it all only on the supposition that the tuberculous lesions of the remaining kidney have practically, if not quite, healed.

These cases, from two and one-half to eight years since the operation, are of long enough standing to show results; and when it is remembered that they were all bad cases rapidly progressing and that the patients are now well, I think we are justified in concluding that some patients, even with bilateral involvement, can be saved by operation. The cases, however, must be carefully selected. The separately collected urines must be examined sufficiently to enable one to judge of the ability of the remaining crippled kidney to sustain life. This is a difficult matter to estimate, as it is impossible to tell the recuperative power of a particular organ. A kidney which is doing insufficient work in a badly septic body may have its functional capacity increased remarkably when relieved of its burden of intoxication. One must depend, therefore, on an experienced judgment based on all the facts of the case, rather than on any particular test-tube findings. The two factors which I believe are instrumental in favoring healing in these cases are the facts, first, that by removing the badly diseased organ we relieve the system of an immense amount of toxic matter, which is constantly injuring the other organ to take care of, and second, that by removing one organ, we increase the blood supply to the other and thus induce, if not a Bier's passive hyperemia, at least an active hyperemia.

Of course all such patients after operation should receive the best hygienic, general and specific treatment possible.

In conclusion the burden of my plea is this:

First, I urge a more thorough and systematic investigation of all patients presenting urinary symptoms in order to recognize tuberculosis of the kidney in its early stages. Second, I believe that bilateral involvement is not in itself a contraindication to operation but that in suitably selected cases, in which one organ is only slightly involved, the removal of the more extensively diseased kidney may be an aid to the recovery of the other. Third, when a diagnosis has been made early, and the lesion is presumably slight, hygienic general and specific treatment should be given a fair trial before a resort is had to nephrectomy. Fourth, when an operation is undertaken, it should be a complete nephrectomy, if possible, as incomplete operations, such as nephrotomy, partial resection, etc., have not been followed by good results.

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THE INOCULATION ACCIDENT IN MANILA IN 1906

CONTAMINATION OF CHOLERA VACCINE WITH PLAGUE VIRUS

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About two years ago Dr. Paul C. Freer, Director of the Bureau of Science, Manila, P. I., reported[1] an accidental contamination of Haffkine anticholera vaccine with the virus of plague, which occurred in Manila in 1906. A number of natives were inoculated with plague, and several died. It is supposed that some one placed a forty-eight hour virulent plague culture, insufficiently labeled, among the cholera cultures, and that the whole were mixed and inoculations immediately made.

CHOLERA VACCINATION IN INDIA

The study of vaccination against cholera, according to the method worked out in 1890-93, in the Paris Pasteur Institute, began in India in April, 1893; that is, about thirteen years previous to the Manila accident. The procedure which was adopted for cultivating and inoculating the vaccines was described, with great detail, in a pamphlet[2] by Mr. E. H. Hankin, M.A., Chemical Examiner and Bacteriologist to the government, Surgeon Lieut.-Col. C. H. Owen, I.M.S., Medical adviser to the State of Patiala, and myself. Lieut.-Col. (then Surgeon-Captain) Hare, I.M.S., the present sanitary commissioner of Eastern Bengal and Assam, published a more detailed version[3] of the same technic two year later; and, somewhat later still, a description[4] of the method of transforming cholera virus into the vaccine strain.

The extent to which the above procedure rendered the operation safe, and the facility with which it was learned by non-specialists and by subordinates, may be gauged from the following facts.

The inoculations were at first carried on by myself; and between 1893 and 1896 were introduced in over a hundred towns and villages in the Indian plains and the Himalayas. I prepared the vaccine in trains, while traveling from place to place, in the ordinary passenger carriages and at railway stations, while waiting for the arrival of trains; also in tents, in "dak-bungalows" and

1. Accidental Inoculation with the Virus of Plague, THE JOURNAL A. M. A., April 13, 1907, xlviii, 1264.
2. Technic of Haffkine's Anti-Cholera Inoculation, Lahore, Punjab, 1894. The pamphlet was reproduced in the Indian Medical Gazette, Calcutta, June, 1894.
3. Ind. Med. Gaz., June, 1896.
4. Technic of Haffkine's Method of Preparing Fixed Cholera Vaccine, Ind. Med. Gaz., November, 1896.

rest-houses; in rooms placed at my disposal for a day or two in dwelling-houses and transformed for that time into "laboratories;" and sometimes (in Calcutta and Agra) in established laboratories, in which various work was carried on at the time by other workers. Between April, 1893, and July, 1895, 42,197 people, who received in all close on 70,000 injections, were inoculated under these conditions, and in 1896, a further 30,000 were so operated on. A large proportion of the inoculated lived under medical and administrative supervision so that any unusual effect of the inoculation could not have escaped notice. Thus, those operated on of 1893-95 comprised officers, non-commissioned officers and men belonging to 64 British and Indian regiments; permanent laborers of 45 tea plantations in the Brahmaputra and Surma Valleys of Assam; inmates of 9 civil jails; children of boarding and other schools, etc.

In 1894 the municipal corporation of Calcutta voted a grant to its health office for applying these inoculations experimentally. A Hindu medical inspector, Mr. Jonomanjoy Chowdry, was put on to this duty. He was assisted, in the preparation of the vaccines, by two other Hindu officers, Messrs. Jogendranath Dutt and Sasi Bhusan Ghose, of the Calcutta health office. None of these doctors had been acquainted with bacteriologic work before. Apart from the preparation of the cholera vaccine, which, after a period of instruction, they were left to carry on independently, they became soon engaged in a variety of other kindred work, notably in connection with infectious diseases affecting the ponies, buffaloes and bullocks in the "gowkhanas" of the municipal scavenging department; with outbreaks of rinderpest and other epizoötics reported from Calcutta and Howrah; and in connection with the then health officer's studies of pustules and vaccine lymph, in the municipal vaccine depot. Cholera inoculation in the bustees and suburbs of Calcutta, with cultures prepared in the health office, was carried on daily for two years, and was closely followed by various members of the municipal corporation. The number of persons inoculated was 7,690. About two-thirds of them underwent inoculation twice, at an interval of five days, so that the number of injections of vaccine performed was about 13,000.

In 1896 anticholera inoculation was started at Purulia, on the Bengal Nagpur railway. At first Surgeon-Captain (now Major) J. C. Vaughan, I.M.S., Superintendent of the Campbell Medical School, Calcutta, then Deputy Sanitary Commissioner of the Chota Nagpur circle, was in charge of the work. Two Hindu assistant-surgeons were appointed to operate under his orders. Surgeon-Captain Vaughan was after a few months, ordered away to the Tirah campaign; and from that time on, one of the assistant-surgeons, Gopal Chunder Mukerjee, was left in independent charge, the other cooperating with him. In this depot the operations were performed every day for eight and half years, till the end of 1904; in all 45,760 persons were inoculated.

The material for these inoculations was manufactured, examined and used in an improvised laboratory, by workers who had had before no bacteriologic training. The inoculated were almost exclusively coolies contracted for transport to Assam, and who were, at the time of inoculation, and during their subsequent journey and service, under the supervision of government and labor supply officials. The slightest mishap would have at once been known to the emigration authorities and reported on.

In none of the above operations has an untoward result at any time come to knowledge; and quite certainly no accident of any gravity has ever occurred. Anticholera vaccination has thus been demonstrated to be free from danger as any method ever devised by man.

NATURE OF THE ANTICHOLERA VACCINE

Just as in vaccination against smallpox and inoculation against hydrophobia, as well as in Professor Kolle's inoculation which the Manila laboratory has applied against plague, the vaccine used in anticholera inoculation is a live virus, and is not sterilized before injection. Nevertheless, the details mentioned in the preceding paragraphs, referring to a long testing in India, indicate that the methods followed in the preparation and use of that vaccine render it, even in relatively inexperienced hands, safe from contamination, and eliminate sources of mishap.

Again, neither in the anticholera vaccine, in the emulsion of spinal cords containing live hydrophobia virus, as used for antirabic inoculation, nor in the live virus of smallpox vaccine lymph, nor in any of the serums and drugs used in hypodermic injections in man and animals can contamination with harmful germs be detected with certainty by the microscope; but obviously this does not mean that either of the methods mentioned, now so extensively practiced, is insecure. In the anticholera inoculation, the examination by the microscope is an adjunct so important that, when applied in the way in which it has always been applied in India, an accident such as occurred in Manila is impossible; and an extraneous culture like that of plague would be detected immediately. Nevertheless, entire elimination of mishap is secured, obviously, not by microscopic examination alone, but by an *ensemble* of operations of which some precede and others follow that examination, and by the general dispositions of the work.

CONDITIONS OF THE MANILA ACCIDENT

In the accident at Manila it is essential to note that the cholera vaccine did not become contaminated by plague spontaneously. Such an eventuality may be treated as outside all practical possibilities. Every bacteriologist of experience will take on himself to say that the spontaneous invasion of a bacterial culture by germs of cholera, plague, glanders, anthrax, diphtheria, tubercle and certain other specific microbes is not to be thought of any more than the spontaneous contamination of such a culture with arsenic or strychnin. There are few pathogenic species, like those causing abscesses for instance, which are, on occasions, found to contaminate cultures and other materials. In Manila a plague cultivation, presumably pure of admixtures of any kind, was put by the operator into a watery suspension of cholera cultures, the latter probably being at the time quite pure and uncontaminated also.

The accident became possible by this circumstance, among others: that the operator deviated from the following two rules prescribed in the anticholera inoculation, namely, the contents of the culture tubes should not have been mixed; and each tube, immediately before being used should have been, apart from other examination, submitted to an examination by the microscope. Under these circumstances a plague culture would have never passed for a cholera culture.

It is not stated that the material injected into the men in Manila had been examined by the microscope; but the Technical Committee of Inquiry found that when they mixed in an experiment *ad hoc*, the contents

of one cultivation tube of plague with that of a large number of cultivation tubes of cholera (as had been actually done at the time of the human inoculation) and examined a drop of the mixture, the plague bacilli were overlooked under the microscope. Such a result is, of course, only too probable.

CONDITIONS NECESSARY TO PREVENT ACCIDENT

The details of the Manila accident reported by Dr. Freer tend to show that its occurrence did not stand in connection with the degree of perfection or deficiency which belong to cholera vaccination or to any bacteriologic method as such.

In all pharmacies and shops where collections of drugs are kept, simple regulations are adopted, on the responsibility of those in charge, for making it impossible for dangerous materials to get mixed with harmless ones. Obviously these measures had, at the time of the accident, not been in force at Manila; and it must be presumed that some particular circumstances which existed at the time, did not allow them to be put in force.

It is, further, a practice with those in possession of materials of various kinds, particularly harmful ones, to differentiate these by inscriptions or marks of identification. The first action of an apothecary, when handling his phials, is to look at the label, independent of any other mode of examination, chemical, physiologic or other, which may be at his disposal for identifying the materials. The labeling of cultivation tubes is one of the articles of instruction mentioned in bacteriologic text-books and lectures. In the pamphlet on the "Technique of the Anti-Cholera Inoculation" referred to above the procedure is enjoined on page 8, paragraph 12, where it is directed: "mark the inoculation tubes unmistakably, in order that the kind of vaccine they contain, and the date of their inoculation shall be known." The operator who omits to provide his preparations with clear inscriptions, or omits to take notice of them when using the preparations, renders obviously nugatory the whole of the safeguards, however perfect, which have been devised for preparing his materials in a pure condition.

In Manila, where the tubes of vaccine for inoculation in man had to be incubated in the same box as tubes of virulent plague, and other persons than the vaccinator had access to the same incubator and to the same batches of tubes, it is stated that the inscription on the tube was not ascertained previous to using it. The accident was, therefore, in every way of the same kind as would be incurred by a pharmacist mixing up a poisonous substance with the drug which he is preparing; and it was preventable also in the same way as such accidents are prevented in pharmacies.

TESTS APPLICABLE TO THE VACCINE

The idea that the Indian method afforded no possibility of avoiding the accident appears to have been based on the following considerations mentioned by Dr. Freer: "While the method allows of every test as regards the purity of the cultures up to twenty-four hours before their use, after this time (when many cultures are employed) no satisfactory test of their purity can be made and no test on animals can be carried on, since the cultures must be inoculated twenty-four hours after their preparation." The accident was caused by the mixing up of a plague culture with cholera vaccine at the very moment of using the latter. Obviously, no test applicable twenty-four hours or any longer interval before that moment, nor any test applicable a shorter period, even one hour before, could have prevented the results of a confusion thus made. To avoid such a confusion—once the general regulations in force at the time permitted of its occurrence—a test or tests were required applicable at the moment of using the tubes. The most direct of such tests were those mentioned already, namely: (1) the reading of the inscriptions made for that purpose on the receptacles; and (2), the examination under the microscope of the contents, in the manner prescribed for the anticholera inoculation. There were also certain other aids, but the special object of the present article does not seem to require entering into them.

ANTICHOLERA INOCULATION AS SAFE AS OTHER VACCINE METHODS

The Manila officers have gracefully recognized as conclusive the results of the Indian cholera vaccination studies, and have themselves contributed not a little to the subsequent investigations on the matter. A few years ago, before introducing that vaccination in the Philippines, the very able director of the laboratory there made, in the Institute for Infectious Diseases in Berlin, a study of the vaccine used in those operations. The vaccine, as described in the publications already referred to, is a strain of cholera germs transformed into a virus of exalted fixed potency, by cultivating it, in accordance with certain rules, in the peritoneal cavity of the guinea-pig. The bacteriologists in Berlin compared this vaccine, from the point of view of its immunization properties, with the natural strains of cholera germs maintained by cultivation in laboratories, and convinced themselves of the significance of the transformation imparted to the vaccine. Consequently, in the Philippines, a strain has been adopted, for preventive inoculation in man, which is prepared and maintained in the way in which this is done in India; but instead of operating with that substance itself, they have adopted the plan of leaving it to digest in water and using the resulting soluble extraction, a plan to which, as Dr. Freer mentions, it was objected at the last International Medical Congress in Berlin that it might not have the protective effect which the vaccine itself had. The Manila officers are under the impression that one of the advantages of the watery extraction over the original vaccine is that it is free from the possibility of misadventure which they have had with the vaccine. The same department of the Manila Institute which prepares the extraction of the cholera vaccine prepares also soluble products of other microbes, such as the toxin of diphtheria; that of tetanus, of which the admixture of a few cubic centimeters would, of course, suffice to kill a horse; probably, solutions of snake venoms for the preparation of antivenene, and so forth. If these microbial toxins and solutions, or, for the matter of that, any alkaloids and other drugs were to be so kept as to permit of their being inadvertently mixed with one another; if, before using them under such circumstances, the inscriptions on the receptacles were not ascertained; physical differences of the contents overlooked; and the contents mixed together and used; that is, if a concurrence of circumstances took place identical on all points with that which they have had the misfortune of having at the time of the late accident the extraction of the cholera vaccine would obviously be exposed to the same possibility of misadventure as

has occurred in the use of the vaccine. Of course, it is not suggested for a moment that the above is the condition prevailing normally in the Manila Laboratory. The latter has, in a few years, and most deservedly, taken a place amongst the first-class institutions of its kind in the world. It is only unavoidable now to make clear that their accident has not been conditioned by the peculiarities of the anticholera vaccination method, as they believe it has.

It is to be hoped that the above explanations will not be viewed as implying any want of consideration for the Manila scientists whose efforts, ever since the establishment of their laboratories, have enriched science with numerous contributions of a truly remarkable character.

SUBMUCOUS PERINEORRHAPHY

A REPORT BASED ON SIX YEARS' EXPERIENCE WITH AN ORIGINAL METHOD *

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The methods of perineorrhaphy that have been chiefly employed for the past twenty-five years suggest more of a mathematical than an anatomic basis for their existence. For the most part, they have consisted of excisions of mucous membrane from the posterior vaginal wall having geometrical patterns that vary as do the fancies of different surgeons. In support of the various operations much has been written about the laceration in the muscular and facial planes and of the effectiveness of particular operations, yet one who studies the work of various gynecologists will be impressed by the thought that usually the precise anatomic restoration of the perineum occurs only in the theory of the operator, for the operation, as a rule, consists of little more than the removal of an area of mucous membrane and the union of the wound edges. If at times the operator's needle is made to sweep in various directions with the specification that certain muscles are caught in its grasp, the precise evidence that such muscles are included and especially any evidence that the important fascial planes of the perineum are restored is rarely observed.

In the Emmet operation, which has long been praised as the best method of restoring the pelvic floor, the crest of the rectocele is caused by the crown stitch to be brought close to the posterior edge of the vaginal opening. As normally the point indicated by the crest of the rectocele occupied a position some distance above the introitus, the operation shortens the posterior vaginal wall. The lateral triangular denudations obliterate the normal lateral sulci; so that after the Emmet operation the vagina in this region loses the normal H-shaped section and becomes less dilatable. But few operators carefully investigate the muscular structures in doing an Emmet operation and fewer make an exposure of the muscle or use an accurate method for the muscular restoration, while the fascial planes of the pelvic floor are almost invariably ignored in the operation, although they may at other times be the basis of an elaborate theoretical discussion. In this type of operation the through-and-through sutures serve as setons, carrying vaginal secretion to the depths of the wound, and by irritation tending to increase the amount of fibrous tissue in the perineum. The sutures in the vagina entangle secretion, interfere with proper cleanliness and at times are difficult of removal, and if overlooked or partly removed may remain in the tissues and cause abscess or sinus formation, and protracted disability. Similar serious objections may be brought against most of the conventional operations for the restoration of the perineum. In an endeavor to obviate some of the disadvantages of the older technics I devised a method of perineorrhaphy that was first put in execution in 1902. The operation proved to be satisfactory and the method has been demonstrated to students and acquaintances for the past six years, and during this time I have employed it exclusively for all secondary repairs of the perineal floor. In 1904, my colleague, Dr. A. C. Applegate, delivered without perineal laceration a patient on whom the operation had been done the previous year, of a full-term child, and the experiences of others who have tried and adopted the method and the tendency of certain other operators[1] to devise independently, methods of perineal repair based on similar principles emphasize the conclusion that this is a type of operation distinctly superior to the older operations of Emmet or Hegar. To object to the present operation because it gives a greater muscular and fascial support to the vagina than is normal is not consistent with the acceptance of modern operations of herniotomy.

The operation is based on the following principles:

First, no tissue is removed or extensive denudation made.

Second, buried, absorbable, layer sutures are used exclusively, none of which penetrates the skin or mucous membrane.

Third, the operation is done from the outside of the vagina, rendering the introduction of sutures easier and the exposure of tissues better than with those operations done from within the vagina.

Fourth, each structure is sutured with precision under the guidance of the eye; there is no blind groping with the needle for tissues not seen and perhaps not felt.

Fifth, each of the layers of the perineal floor—vaginal wall, submucosa, muscular supports, fascial planes, and skin—are united seriatim in layers after the plan of the better types of herniotomy.

Sixth, the vagina is not separated from the rectum and therefore there is no danger of wounding the bowel.

The operation has the following advantages:

It restores and increases the length of the vagina instead of shortening the posterior wall of the vagina as occurs with many of the older operations. Although no tissue is removed it is questionable if any other type of perineorrhaphy is capable of producing greater narrowing of the external portion of the vagina or of affording greater support to the anterior vaginal wall. As it greatly supports the anterior vaginal wall, slight or moderate degrees of cystocele may not require additional operation. I have only done the additional operation when the cystocele was marked and yet have thus far had no reason to regret the practice. The operation restores the normal H-shaped section to the vagina instead of destroying or obliterating the lower lateral sulci. There is the added advantage that no sutures require removal; that no foreign bodies in the shape of shot, suture ends, or the like are left in the vagina to promote and to hold secretion and that the

* Read before Philadelphia Obstetrical Society March 4, 1909.

1. Hill: Restoration of the Pelvic Floor. THE JOURNAL, April 4, 1908.

seton action of through and through sutures is avoided. Moreover, the proneness of knots in catgut to untie when exposed on a mucous membrane is obviated by the burial of all knots in the tissue. Despite the number of buried sutures in none of my cases has the perineum been destroyed by suppuration, and the resultant perineum is more elastic and resilient as less fibrous tissue forms than after the older operations with the use of denudation and through-and-through sutures. In one of the early cases in which the mistake was made of freely separating the vagina from the rectum, the rectum was opened with the result that the posterior portion of the wound became infected. In this case the vaginal support, however, was not destroyed. In my experience in only one case has the perineum given way and in this the healed wound was ruthlessly torn open by the husband a week or ten days after the operation.

Comparing my experience with the Emmet operation with the present one under equal aseptic precautions, the liability to suppuration seems less, the required period of disability shorter, and the inconvenience of suture removal, and the danger of non-absorbable sutures obviated in the present operation. Comparing the end-results of the two methods a more perfect perineum with a better muscular support and a closer approximation to a normal restoration is secured by the method of submucous perineorrhaphy.

In doing the operation, one should realize that the vagina runs nearly parallel with the skin perineum, and that the finger introduced to the cervix may be but half an inch distant from the finger of the external hand placed on the skin adjacent to the coccyx. Lateral to the vagina one may nearly always distinguish the thick broad bands of the levator ani muscle. In the nulliparous woman the muscle is close to the introitus, in the multiparous it is more deeply situated. By placing a finger against the anterior edge of this muscle on either side and comparing the relative depths of the muscle from the surface, one may acquire an idea as to the relative injury to the two muscles. Rarely ever will one find the muscle completely divided lateral to the vagina; but on the side of greater laceration the edge of the muscle will usually be found to be from one to several centimeters deeper than that of the opposite side.

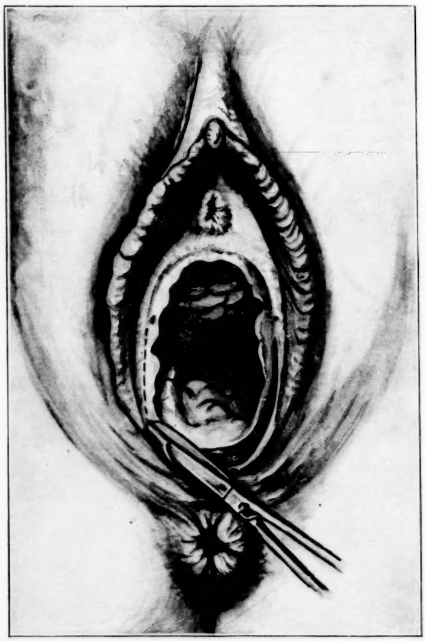

Fig. 1.—Step 1: The first incision made by scissors or knife at the base of the carunculae. The incision is U-shaped, enters the submucous areolar tissue, and is slightly external to the orifice of Bartholin's glands. According to the degree of contraction of the orifice required, the incision starts and ends anterior to, opposite to or posterior to the level of Bartholin's glands.

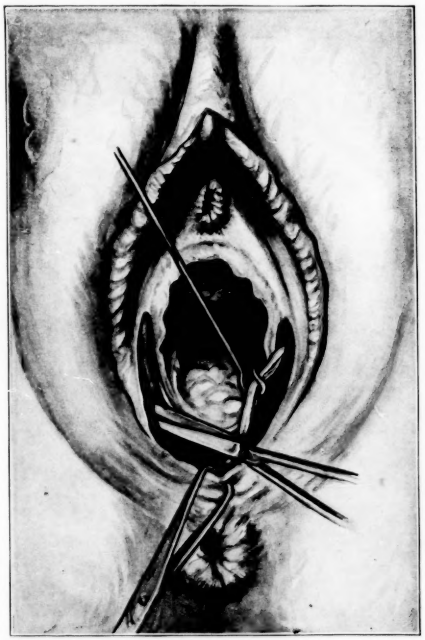

Fig. 2.—Step 2: Isolation and exposure of the internal edges of the levator ani muscle. The vagina is not separated from the rectum in the median line, and therefore there is no risk of wounding the rectum. The posterior edge of the incision is retracted by a tenaculum to secure better exposure. A sharp pair of scissors is then thrust through the fascial plane, lateral to the vagina, opened and withdrawn, affording access to the levator ani. This incision is enlarged by stretching with the fingers (as indicated by the dotted lines), or, if the tissue be cicatricial, by further incision. The finger is then thrust through the incision close to the external wall of the vagina and the levator ani isolated from the vagina. The external surface of the levator ani is likewise freed and the muscular edge pulled into the wound by a hook or tenaculum forceps. The edge of the opposite half of the levator ani is similarly freed and brought into the wound.

TECHNIC OF THE OPERATION

The parts are carefully asepticized in the usual manner and the anus covered by a sterile towel or gauze

pad held to the skin by appropriate clips. The labia having been separated and supported by the fingers of an assistant, the sharp point of a pair of scissors is introduced into the subcutaneous cellular tissue just external to the orifice of Bartholin's gland. The incision is carried around the posterior margin of the introitus just external to the carunculæ until a point external to the orifice of the opposite Bartholin's gland is reached. A pair of tenaculum forceps is then fastened to the outer edge of the posterior part of the incision to serve as a retractor. No separation of the vagina from the rectum is necessary except when the tissues about the posterior commissure are so cicatricial that the usual gaping of two or three centimeters of the wound edges is not obtained. If the posterior wall of the vagina is bound down and deformed by cicatricial tissue this should be loosened sufficiently to overcome the deformity (Fig. 1.)

The second step consists in the exposure of the levator ani. The edge of the muscle is located between one finger placed against the lateral wall of the vagina, and a second finger or thumb placed in one side of the wound. Having located the muscle in the wound, a pair of sharp-pointed scissors is thrust through the depths of the wound to the situation of the anterior edge of muscle, then opened and withdrawn. This penetrates the remains of fascia of Colles, the two layers of the triangular ligament and perhaps the thin and at times almost inconspicuous layer of the transversus perinei profundus which lies between. The opening is enlarged by stretching with the fingers, or if necessary, by a few touches of the knife, and the finger is passed into the opening close to the lateral vaginal wall until the edge of the levator ani is felt. The muscle is freed on its inner and outer sides by the finger, grasped with a pair of tenaculum forceps, and pulled into the wound. On the side of greater laceration the muscle will usually be found to have the deepest situation. The isolation and exposure of the muscle is usually easy and requires but a few seconds of time. Very rarely will the muscle be found to be completely divided. The opposite edge of the levator ani is then exposed and brought into the wound in the same manner (Fig. 2).

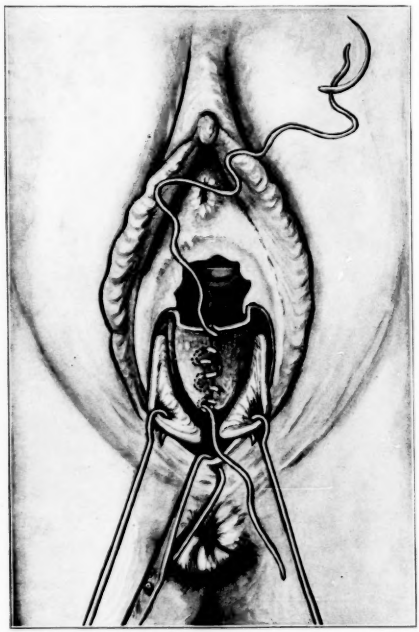

Fig. 3.—Step 3: Submucous closure of vaginal wall. With a continuous suture of plain, number one catgut, beginning below, the edges of the vaginal wound are united. This suture does not penetrate the mucous surface and serves to lengthen the vagina and to narrow the introitus. If the posterior vaginal wall be very redundant, this first suture may be buried by a second row of interrupted or continuous sutures, catching the tissues lateral to the first and so rendering the vaginal wall thicker, more rigid and more convex. When a level above that of the emergence of the muscles has been reached this suture is temporarily laid aside.

Fig. 4.—Step 4: The edges of the levator ani muscles are united in the median line under the united vaginal wall by mattress sutures. This muscular sling accentuates the lateral vaginal sulci and restores the normal H-shaped section to the vagina. In certain cases a continuous or simple interrupted suture may be substituted. Some of the sutures should catch the under surface of the vagina to prevent the formation of a dead space. Below a modified figure-of-8 suture is shown, which serves to unite the levator ani with the sphincter ani and to support the sphincter. This figure-of-8 type of suture in this situation is not usually required and frequently no support or reinforcement of the sphincter is necessary. If the sphincter be divided, however, the ends are to be isolated in the wound and united by buried sutures of chromicized catgut, and in extreme cases the sphincter may also be reinforced by slips of the levator ani split off from each internal edge, crossed and wrapped about the sphincter and sutured into place. No additional incision is required in a complete tear, but merely sufficient dissection in the wound to expose the divided ends of the sphincter, which are then united.

The third step of the operation consists in the repair of the vaginal mucous membrane. With a curved needle and No. 1 plain catgut the mucous membrane is united beginning near what was the posterior commissure. A continuous suture is used engaging the submucous cellular tissue a short distance from the wound edges and uniting the upper border of what was a transverse incision in a vertical manner. In doing this, the part of the vagina that was near the posterior commissure comes to occupy a point several centimeters above the introitus and the length of the vagina is restored. If there is much redundancy a second row of sutures may be applied catching the tissue outside suture number one and so rolling the submucous tissues together that the convexity on the mucous surface of the posterior wall of the vagina is markedly increased. Suture number one which has thus made a partial submucous closure of the vaginal wall is then temporarily laid to one side to be finished later (Fig. 3).

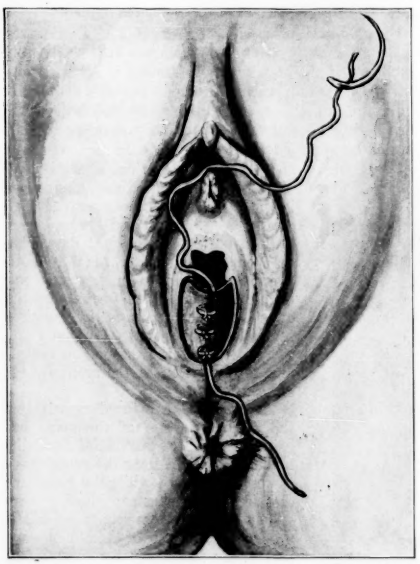

Fig. 5.—Step 5: Suture of the inferior fascial plane (urogenital trigone) over the united muscles. This supports and reinforces the united muscles, and, as the transversus perinei profundis muscle lies within this fascia, the action of this muscle is reinforced. A continuous, interrupted, mattress, or imbricating suture may be employed, depending on the strength of the suture line required in the particular case. The ends of suture one are shown emerging above and below.

The fourth step of the operation consists in uniting in the median line the edges of the levator ani muscle, which are located by the attached tenaculum forceps. Interrupted, continuous or mattress sutures of chromic catgut may be employed, but the muscle must not be united so far anteriorly as unduly to constrict the orifice. Some of these sutures catch the underlying submucous tissue to prevent the formation of a dead space. Posteriorly, a simple or figure-of-eight suture is employed to bind together the various structures that meet here, and if necessary, to give support to the sphincter ani. In certain cases, it may be desirable to reinforce the sphincter ani by splitting off strips from the anterior edges of the levator ani, wrapping these about the sphincter and fixing them in place by sutures. Rarely is a similar procedure desirable anteriorly to reinforce the vaginal support. Should the levator ani be found to be torn, which is not usual, the divided ends should be pulled well forward, carefully isolated and repaired by buried sutures. With the union of the levator ani muscles the rectum, anus and vagina will be found to ascend to a higher position in the pelvis, and to be carried forward toward the pubis (Fig. 4).

The fifth step of the operation consists in the suturing of the inferior fascial plane to reinforce the muscular support. The outer edges of the incision through which the levator ani muscles have been brought are united in the median line by continuous, interrupted, mattress or imbricating sutures of No. 1 chromic catgut, as may seem necessary in the particular case. This support, which includes the posterior part of the urogenital trigone, affects the layers of the triangular ligament and the deep transversus perinei muscle, and posteriorly serves to increase the tension on the transversus perinei muscle. To obliterate any dead space some of the sutures may catch the under-lying muscle (Fig. 5).

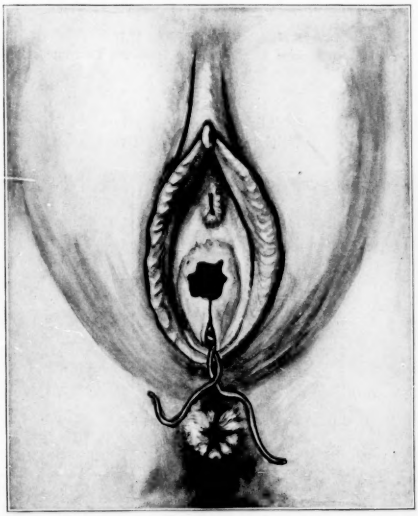

Fig. 6.—Step 6: The unfinished suture of step three is now continued under the cutaneous edges of the incision until the fourchette is reached, where the two ends of this suture are tied and the knot permitted to sink into the wound out of sight, the ends being cut short. The tying of the ends of this first suture binds the various structures—vagina, muscle, fascia and skin—together and prevents the formation of dead spaces. This elevation and reinforcement of sphincter ani is indicated.

The sixth and final step of the operation consists in completing suture number one which after completing the submucous union of the vagina is continued posteriorly under the skin uniting the subcutaneous and Colles fascia until the posterior portion of the incision is reached. The two ends of suture number one are

then tied, binding together the various structures that have been united; the knot is permitted to sink under the skin, the ends being cut short (Fig. 6).

Thus there has been built up in layers a perineum consisting of united mucosa, muscle, fascia and skin. All the sutures being buried and the layers bound together compactly there are practically no dead spaces. A small strip of iodoform gauze introduced into the vagina is permitted to hang down over the skin sufficiently to cover the skin incision. This serves as a guide to the nurse in catheterizing and protects the incision. The catheter is used for two days after which the gauze is removed and if desirable a daily douche is given. The patient may sit up on the tenth day, and cautiously resume her duties after two weeks.

2033 Walnut Street.

THE TREATMENT OF SCOLIOSIS

ARTHUR STEINDLER, M.D.
Assistant Orthopedic Surgeon to the Home for Destitute and Crippled Children
CHICAGO

In treating scoliosis by means of orthopedic corsets I think that it is difficult to meet the two most important requirements, the one of giving a reliable and uniform support to a deformed spine, the position of which has been improved by mechanic or gymnastic treatment, and the other of exerting a correcting influence on certain parts of the body by means of the orthopedic corset itself.

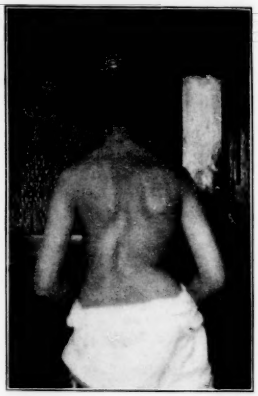

Fig. 1.—Patient with scoliosis.

Fig. 2.—Same patient as in Fig. 1, with orthopedic corset.

A number of good and practical corsets have been devised, giving satisfactory results to a considerable extent. While the Hessing corsets furnish only a thorough support to the spine, a good correcting corset has been described lately by Bradford, the correcting force being exerted by means of shoulder straps, circular transverse springs and a swinging upright for pressure on the neck. But it seems to me that in cases in which there is a considerable shifting of the body to one side, for instance, in which the lumbar part of the spine is primarily involved in the curvature, not enough hold may be gained for correction and the maintenance of the corrected position of the spine.

The sideward shifting of the body will always result in a lifting of the pelvic belt of the corset from the crista ilei of the opposite side, unless its position there is otherwise secured. In order to obtain this advantage, and, on the other hand, to exert some correction on the costal prominence, I attached to the pelvic belt on the healthy side a thigh-piece connected with a hinge and embracing the leg by means of a padded ring right above the knee.

On the side of the scoliosis a pad corresponding to the costal prominence articulates by means of a hinged steel piece with the pelvic belt, a similar pad being attached on the corresponding anterior costal prominence of the opposite side.

On both pads a considerable amount of elastic pressure is secured by a couple of springs. It is easily to be seen that, if the attachment to the leg is given an outward bent and then fastened closely above the knee, an opposite movement of the pad will result in bringing the sideward shifted body over the mediam line to the other side.

Two uprights in the back on both sides of the spinous processes give the body rest and allow the shoulders to be pulled back by means of shoulder-straps (Figs. 1, 2, 3 and 4).

Both patients with right dorsal lateral curvature, shown in the photographs, were given a previous mechanical treatment of several months. It consisted in gymnastic exercises, manual redressement, especially directed toward the lumbar curvature and the detorsion of the scoliosis, and some massage.

After I had convinced myself that the lumbar portion of the spine had gained a sufficient amount of flexibility I had the patient wear the contrivance, as described above, while the gymnastic exercises were being continued.

The considerations which led me to pursue this mode of treatment are, briefly, the following:

I have to a great extent given up mere extension as a method of correcting curvature, because of the fact that the detorsion of the body would not keep pace with the extension of the spine thus obtained, the formation of flail intervertebral joints and increased flabbiness of the spine being the result. Most of my attention is directed toward the detorsion of the chest and the mobilization of the lumbar part of the spine, which, as a rule, is the last to maintain a certain degree of flexibility, when the dorsal part of the spine is already hopelessly fixed. Then, if the sideward displaced body is shifted to the other side by means of the apparatus and an over-correction exerted, the upper part of the spine will have to respond with a self-correcting secondary curvature to the side of the disease in order to regain the median line.

Thus a considerable improvement of the deformity is caused under the influence of weight-bearing and without causing flail joints, while other

methods try to overcome the influence of weight-bearing and result in the establishment of loose joints.

In cases treated after Schanz' method (double extension from neck and ankle and application of correcting plaster-of-Paris jacket, to be changed every four to five days under similar precautions) I have also seen the straightened spine assume the form of triple scoliosis in spite of much care in applying well-fitting casts, the deformity, however, being considerably improved. It seems that the flabby spine came to a rest in this form of deviation if it was forced by the jacket to keep as near as possible to the median line.

The discomfort of the patient when treated with high-reaching casts and corsets has sometimes proved an unsurmountable obstacle in older girls of delicate and chlorotic constitution.

The principle of using the hip joint and the motion of the leg for correction of deformities of the body might prove useful also in deformities other than lateral curvature. As far back as 1867 leg attachments have been used for corsets, first by Wales, later by Lorinser and Biondetti.

Fig. 3.—Patient wearing scoliosis corset, with leg-brace unfastened.

Fig. 4.—Patient wearing scoliosis corset, with leg-brace fastened.

Clinical Notes

INSTRUMENT FOR APPLYING OINTMENT TO DRESSINGS AND WOUNDS

W. LAWSON THORNTON, M.D.
BALTIMORE

The accompanying illustrations show a simple contrivance for applying ointment to dressings and wounds. The instrument is contrived from an all-metal syringe.

Fig. 1.—Instrument for applying ointment.

The nozzle of the syringe is replaced by a wedge-shaped opening, through which the ointment is expressed in a ribbon-like film. By adjusting the sliding-plate (Fig. 1) the film may be made as thin or as thick as is desired, or the opening may be completely closed. By inverting the sliding plate a narrow film is obtained.

The instrument may be filled after removing the metal piston or by aspirating melted ointment. When the instrument is filled it may be boiled or placed in the sterilizer.

The ointment may be applied to the dressing as is shown in Figure 2, or directly to the wound. If the ointment is applied to the surface of the wound, the instrument is held above the surface and the ointment forced out in a ribbon which applies itself smoothly to the surface of the wound.

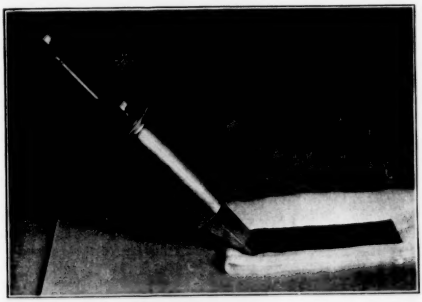

Fig. 2.—Method of applying ointment to dressings.

The instrument has the following advantages:

The ointment is applied in a smooth, even film of any desired thickness, and a neat dressing is obtained.

The ointment is kept sterile and ever ready for use.

A dressing can be made conveniently and rapidly, and the ointment is economized by this method.

The instrument is made in various sizes and can be bought for little more than the cost of a metal syringe. It is manufactured by Willms Instrument Company of Baltimore.

A CASE OF CONGENITAL FALSE DIAPHRAGMATIC HERNIA*

H. S. MARTLAND, M.D.
NEWARK, N. J.

I herewith report the clinical history and autopsy findings of a man who died as the result of a congenital deficiency in the central tendon of the diaphragm, which opening connected directly with the pericardial cavity, the heart at autopsy being surrounded by the entire transverse colon and the great omentum:

History.—The patient was 70 years of age, and was admitted to the Newark City Hospital in December, suffering from intense dyspnea, which he had had for one week. His family and personal history, except for the fact that he was never confined to his bed on account of sickness, throws no light on the condition to be described.

Examination.—On admission to the hospital the patient presented the clinical picture of an acute right heart dilatation, being markedly cyanotic and dyspneic, with a rapid, irregular and feeble pulse. Aside from these symptoms there was little in his physical examination of much interest. The apical cardiac impulse could not be seen or felt, but was heard best in the sixth intercostal space in the left mid-clavicular line. The heart sounds were weak and distant, no murmurs being heard. Examination of the lungs revealed crepitant and subcrepitant râles over both bases posteriorly. The abdomen was negative. Examination of the urine showed a moderate amount of albumen, a few small hyaline and granular casts, with a specific gravity of 1.016.

Fig. 1.—Congenital false diaphragmatic hernia: view of under surface of the diaphragm with the opening.

The treatment consisted of the usual cardiac stimulants, but the patient's condition did not improve and he died seventeen hours after admission.

Autopsy.—When the abdomen was opened, the small intestines occupied their usual position; their serosa showed, in three places, at intervals of about 20 to 30 cm., large injected vessels and a reddened and thickened peritoneum. These areas were practically all in the jejunum, and I took them to be patches of chronic hemorrhagic peritonitis. The transverse colon and great omentum were conspicuous by their absence. The rest of the abdominal viscera were all in their normal positions. The right dome of the diaphragm reached the fourth interspace; the left was opposite the fifth rib. Just above the liver, the hand could be passed through a large, oval opening, 5 by 6 cm., in diameter, directly into the pericardial cavity, where the heart was felt surrounded by the distended transverse colon and the great omentum. Figure 1 is from a photograph taken at the autopsy, showing the under surface of the diaphragm with the opening. On gently dragging on the splenic flexure of the colon, the hernia could be easily reduced as far as the middle of the transverse mesocolon, where there was a small area of gastrocolic omentum adherent to the right free edge of the opening. The stomach was in the abdominal cavity, somewhat turned, a portion of its posterior surface presenting, its greater curvature just entering the hernial opening.

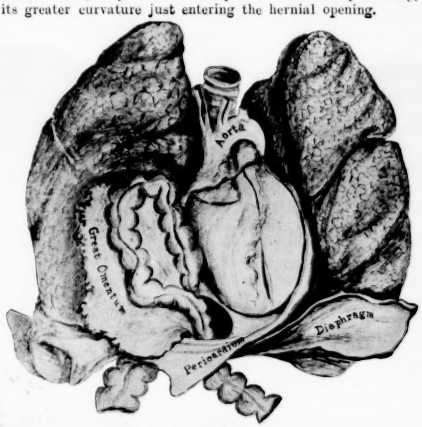

Fig. 2.—Rough drawing of thoracic viscera, showing position of colon in the pericardial cavity.

When the pericardium was opened the parietal layer was found diffusely, but only moderately, thickened. The right heart was dilated, the left ventricle firmly contracted. The hernial opening presented rounded borders, and the peritoneum of the under surface of the diaphragm was continuous with the parietal pericardium. There was no hernial sac. Nor was there evidence found either of a former suppurative pericarditis, empyema of pleural cavities, suppurative hepatitis, subphrenic abscess, ulcer of the stomach, or neoplastic growth near diaphragm.

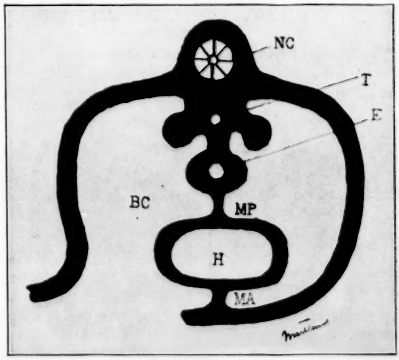

Fig. 3.—Transverse section of embryo at second week.

The remainder of the autopsy showed only the ordinary visceral changes of senility. The left adrenal, however, presented a cortical adenoma about 25 mm. in diameter.

I concluded, therefore, that death had been due to cardiac embarrassment, due either to a slipping of too large a portion

* From the Pathological Laboratory of the Newark City Hospital.

* Reported at meeting of New York Pathological Society, Jan. 13, 1909.

of intestine, or to gaseous dilatation of the same, through a congenital deficiency of the diaphragm in this position.

From the chronic inflammation seen in the small intestine, it seems probable that this portion of intestine also had at times slipped through the hernial opening.

EXPLANATION

To explain this congenital deficiency on an embryologic basis is, I fear, rather difficult, although we may include it under the theory of diaphragmatic hernia in general, namely, that the partition subdividing the primitive body cavity into pleuropericardial and peritoneal compartments is completed by fusion of segments (septum transversum, pillars of Uskow), which for a time are separate. Arrested development or delayed union therefore results in abnormal clefts, and it is evident that various degrees of developmental arrest or delayed union may produce corresponding imperfections in the future diaphragm.[1] I think that in the case in question such an arrest took place about the fifth week of embryonal life. It seems also that the case is, more strictly speaking, a teratologic rather than an embryologic fault, and one which is closely allied to a beginning subthoracic ectopia cordis.

I give a rough and brief description of the development of the diaphragm. Let Figure 3 represent a transverse section of a human embryo at about the second week. Let H represent the primitive heart formed

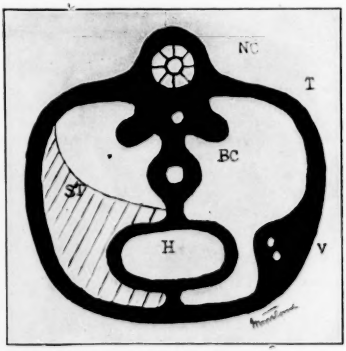

Fig. 4.—Transverse section of embryo showing the septum transversum.

by the coalescence of two tubes produced in the splanchnic mesoderm. It will be seen that the heart in this stage lies embedded in the ventral mesenteric fold. As the anterior body wall is completed the heart becomes connected with the body wall by a portion of ventral mesentery known as the mesocardium anterius (MA), while that portion of mesentery passing from the heart to the primitive gut tube is called the mesocardium posterius (MP). The space between the heart and the body wall (BC) is the celom or body cavity.

Figure 4 represents the next steps in development, which are as follows: Lying in the ventral and lateral aspects of the body wall are the vitelline and umbilical veins (V). As these veins diverge to reach the heart, they carry with them the parietal layer of mesoderm in which they are imbedded, forming on each side a fold that projects mesally and dorsally, the two folds approaching and finally meeting with the ventral mesentery in the median line. This mass is the septum transversum (ST), and its appearance is the first indication of the separation of the body cavity into pericardiothoracic and abdominal cavities. The septum transversum is the anlage of the future diaphragm. Near the dorsal wall of the trunk, on each side of the intestine and its mesentery, the septum is wanting, and thus the two spaces communicate with each other by openings which are known as the thoracic prolongations of the abdominal cavity.

At this stage, then, the four great serous sacs of the body, the two pleural, the pericardial, and the abdominal, are indicated, but are still in free communciation

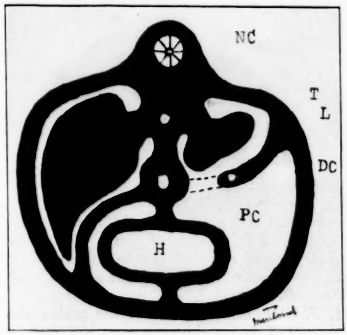

Fig. 5.—Transverse section of embryo, showing formation of pleural and pericardial cavities.

with each other. The pericardial cavity is the first one of these to be closed off, and this is due mainly to the development of a vertical septum, the appearance of which is also dependent on a large vein, namely, the duct of Cuvier, formed in the upper thorax, by the confluence of the cardinal and jugular veins.

It is this inwardly projecting vertical fold of serous membrane containing the duct of Cuvier (DC, Fig. 5), which constitutes the pleuropericardial fold and the appearance of which initiates the division of the thoracic cavity into two spaces, one for the heart and one for the lungs. This fold continues to grow toward the median line of the body until it meets the mesocardium posterius, with which it fuses, thus completing the pericardial sac and isolating it from the pleural spaces.

The lungs, which until now have occupied a very insignificant place (L), lying posterior to the heart, now develop very rapidly, pushing forward and delimiting the pleural and abdominal cavities. In the case in question, through some developmental arrest, the septum transversum has failed to close the communication between the pericardium and the peritoneal cavities. This separation should be complete about the fifth week of embryonal life.

The pleural cavities are finally separated from the abdominal cavity by the growth of two dorsolateral folds, the so-called pillars of Uskow; these pillars also projecting forward unite with the earlier formed septum transversum to complete the diaphragm at about the sixth to seventh week of embryonal life.[2]

1. Piersol, George A.: Teratology, Reference Handbook of the Medical Sciences.

2. Heisler: Text-Book of Embryology.

DIAPHRAGMATIC HERNIAS

There are two general types of diaphragmatic hernias, namely, the acquired and the congenital.

In a total of 276 reports of cases compiled by Lacher,[3] 117 were congenital; the remaining 159 were acquired; of Leichtenstein's 252 cases,[4] 224 were acquired, while 28 were congenital.

Acquired hernia, or rupture of the diaphragm, is therefore the more common type. The etiologic factors are trauma and pathologic perforations due to suppuration around the diaphragm.

Congenital hernia may be subdivided into false and true hernia:

1. False hernia, in which the displaced viscera are not covered by a hernial sac, is more frequent than the true form; in 117 cases, 92 were of this variety. They are more frequent on the left side, and in the muscular rather than the tendinous portions of the diaphragm. All of these were into the pleural cavities. The case which I report is a type of false hernia very rarely encountered, namely, a hernia directly into the pericardial cavity and having no communication with the pleural sacs.

2. True hernia, in which the abdominal organs are covered by a hernial sac of diaphragm, or peritoneum, or both, is quite rare.

I report this case on account of its great rarity, as I am unable in a fairly careful search of the literature to find mention of any similar case. It is also of interest because of the age the individual reached.

I thank Dr. Daniel Elliott, coroner's physician, and Dr. H. F. Cook, on whose service the patient died, for the privilege of performing autopsy and for the clinical history.

MYXEDEMA: REPORT OF A CASE

SAMUEL E. SIMMONS, A.B., M.D.

SACRAMENTO, CALIF.

Patient.—C. L. was born March, 1870, of American parents, on a Yuba county ranch. His paternal grandfather, from Yorkshire, Eng., lost his life by drowning; his paternal grandmother died at 84 of senility; his maternal grandfather and grandmother died at 84 and 89, respectively, presumably of senility. The patient's father died at 54 of "spinal paralysis" after several years' invalidism. His mother, born in Baltimore, died at 58 of sarcoma of the ileum. He has two brothers living; one is well, the other suffers occasionally from "petit mal;" one brother died at nine years of age, the result of epilepsy of traumatic origin; one sister is alive and apparently normal in every respect.

History.—The patient had measles and whooping cough in childhood. He attended school until he was 12 years of age, when he was vaccinated; the lesion caused thereby refused to heal for six months, according to the family; and they attributed his subsequent illness to this. He left school, having previously been considered a bright child; his color changed, and he lost interest in the sports of boys of an equal age. He preferred to sit quietly, and when read to would comprehend about three words in ten; he stopped growing, and, on account of the color and a peculiar puffiness, was treated for "dropsy." By his family and friends his condition was considered to be simply one of "stunted growth." His mother noted at this time that if she told him to stay in one place until her return, no matter if she stayed away the entire day, she would always find that he had remained in the place and position in which she left him.

3. Lacher: Ueber Zwerchfellshernien, Arch. f. klin. Med., 1880-1881, xxvii, 268.
4. Leichtenstein: Ziemssen's Cyclopedia of Medicine, vii.

Examination.—At office, Dec. 20, 1906: The patient's age was 36; height, 54 inches; weight, 74 pounds; pulse 50, poor volume and tension; temperature, taken with three different clinical thermometers at this visit, was 94. The hair on the

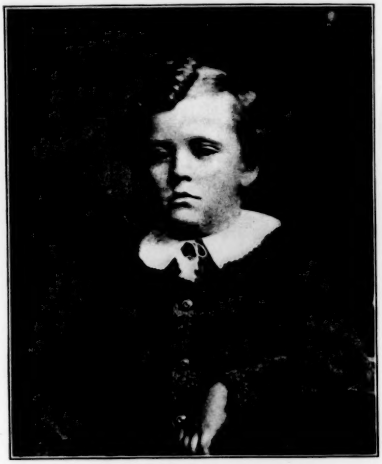

Fig. 1.—Patient at 5 years.

head was scanty and coarse; the hair on the eyebrows, hardly more than lanugo; the entire face, large and expressionless; the upper lids, swollen and baggy; the lower lids, less so, but did not pit on pressure. The skin was dry and harsh and

Fig. 2.—Patient at 10 years.

showed a color between that of jaundice and that of pernicious anemia; the sclera clear. The patient stated that he never perspired. The nose was broad and flat; the lips thick; no hair noted; the patient never shaved. The mucous membranes were pale; the tongue normal. The voice was puerile; the

thyroid gland could not be felt; the sublingual region, also the supraclavicular and infraclavicular spaces, were filled with flattened broad masses, of a consistency resembling "dairy cheese." Everywhere the skin seemed dry and adherent to the underlying tissue. The heart and lungs were normal; the abdomen negative; the pubic hair absent; the sexual organs fairly well developed. The specific gravity of the urine, 1018; no albumin or sugar. The hands were puffy and chubby. The blood was not examined at this time. The patient was not observant; answered questions slowly and with hesitation; did not care to study or to read; occupied himself with very light "chores" around a country place. He had no headaches; his appetite was variable.

Treatment.—The diagnosis was myxedema, and the treatment for this condition was at once instituted. Armour's thyroid tablets, each of which is the equivalent of two grains of the desiccated gland, or Burroughs and Wellcome's tablets, each of which is equivalent to five grains of the fresh healthy gland of the sheep, were administered throughout the course of the disease. Sometimes one preparation was used, sometimes the other, with no difference noted in the therapeutic potency. The treatment was begun with Armour's thyroid tablets: two a day; at the end of four weeks, the patient was taking four tablets a day.

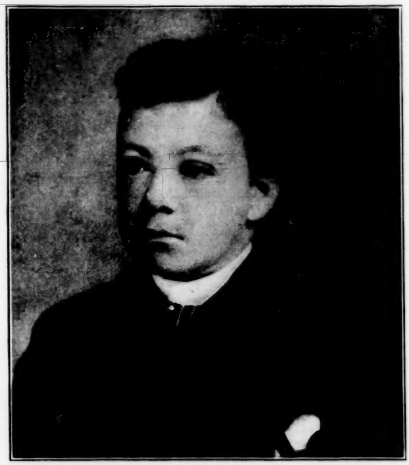

Fig. 3.—Patient at 15 years. (Note incipient myxedema.)

Later History.—On Jan. 28, 1907, five weeks after beginning treatment, the patient reported again. The change in his personal appearance, physiognomy and mentality, was most striking. The pulse was 80; temperature but slightly below normal. A considerable increase of the hair on the head was noted. The voice began to "break," like that of a lad at puberty; the voice had previously been similar in pitch to that commonly found in boys 8 or 10 years old. He felt the cold much less and noticed a change of some sort himself; he said that it felt as if it all were a new world to him. Thyroid treatment was still urged and at next visit, Feb. 20, 1907, the patient had an abundant growth of hair; perspired on exertion, wanted to read and play cards, and when opportunity presented "caddied" on a neighboring golf-course. His color was greatly improved; weight was stationary. From being slothful and indolent, with his greatest usefulness put to driving cows to pasture and home again, the patient had become, in less than three months, very ambitious and worked as an errand-boy in a drug store; the manager stated he was the brightest boy he ever had.

Two years have now elapsed, and save in the initial treatment by the thyroid extract (which lasted two months in continuous dosage), the patient was never under treatment longer than four weeks at one time. The longest respite from thyroid therapy was for a period extending from May, 1907,

Fig. 4.—Patient at 36 years, just before beginning thyroid treatment.

to October of same year, a period of five months, when I was in Europe; at the end of this time some of the old symptoms were again in evidence, namely, characteristic color, loss of expression, swelling and puffiness under the eyes; the mentality, however, continued good. The patient himself wanted to be placed under treatment again. I think that in the future the patient may be reasonably left to his own discretion in regard to treatment, for he always knows when it is

Fig. 5.—Another view of patient; same time as in Figure 4.

indicated. An interesting feature of the case, aside from its rarity in these parts, is that if the patient takes more than three tablets a day, now that a cure is established, or continues the treatment for more than three weeks, he soon shows

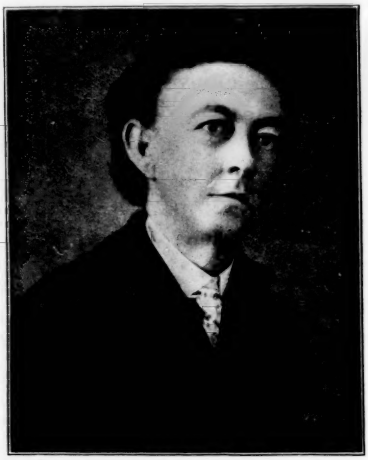

Fig. 6.—Patient six months after use of thyroid.

the symptoms of exopthalmic goiter, namely, nervousness, sleeplessness, slight exopthalmos, nausea, sometimes vomiting and general weakness.

212 J Street.

A CORRECTOR FOR WEAKENED FEET FOR USE AT NIGHT

J. M. BERRY, M.D.

TROY, N. Y.

The weakness and disability of the foot, which culminates in the deformity commonly known as flatfoot is progressive in character. In the earliest stage of the trouble there is present simply a weakness or strain, which causes the foot to assume a weakened position favoring additional strain. The weakened position is later present constantly during activity and soon becomes habitual, and from that it is only a short step to permanent weakness and deformity.

The various stages can be enumerated as follows: (1) weakness and strain, (2) weakened position favoring more strain, (3) weak position in use, (4) habitual weak position, (5) permanent weak and deformed position.

The characteristic position of a weakened foot is the pronated or abducted position. In this position the front part of the foot is turned outward through the midtarsal joint with consequent lowering and weakening of the inner longitudinal arch. There is an apparent rolling inward and downward of the ankle, and the line of body weight drawn through the center of the knee and ankle, when prolonged over the foot, is found to be to the inner side of its normal position. All these elements of the pronated position are increased during weight bearing and activity, and the last result of progressive weakness is the pes valgus form of clubfoot.

In the early stages of a weakened foot the weak position is assumed during weight bearing; but later the foot when at rest and relaxed, with all weight removed, falls naturally into the weak position. In later stages, the weak position becomes permanent, actual structural deformity occurs and the faulty position can be corrected only by forcible manipulation or operation.

In the treatment of weakened conditions of the feet, attention is usually directed to the use of proper braces and shoes combined with manipulation and massage. The principles of such treatment are that the brace will cause the foot to assume a proper attitude, throwing the weight of the body onto the outer side of the foot, where it belongs, while the proper shoe allows the foot to be held in a position where it is least subject to strain and can work most efficiently. Manipulation, massage, vibration, etc., limber up the foot, relieve pain and soreness and give strength.

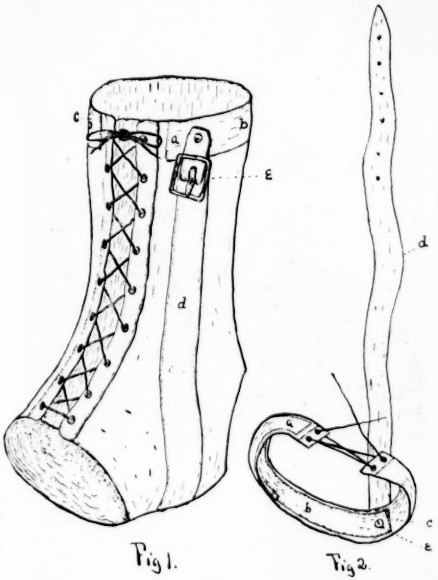

Fig. 1.—An ankle support of soft leather, cut away at the heel and laced up the front, with a band (a, b, c) of thin spring brass, leather covered, encircling the top of the support. A strip of thin spring brass (d), leather covered, is riveted to and extends from one end of the encircling band down the side of the ankle under the heel and up the other side, fastening to the other end of the encircling band. A buckle (e) is riveted through the two pieces of brass and the ankle support.

Fig. 2.—A band to encircle the waist of the foot. For the adult foot this should be 1¼ in. wide. It is made to lace over the top of the foot. A strap (d) is riveted to the encircling band at e, corresponding to the inner and under surface of the foot.

One factor, however, is often neglected, but is of great importance in all orthopedic work in connection with deformities. I refer to the influence of position during sleep. This is of especial importance in children in whom there is the added influence of growth.

As has been said, the abducted or pronated position of the foot is the weak position, and in practically all cases in which the individual has a weakened foot it will be found that the foot falls into a pronated position during sleep. The foot may have been kept in a correct position during the day by braces and shoes, but during sleep, which is usually about one-third of the time, the foot is allowed to assume the pronated or abducted position, and it can easily be understood what an influence this must have on treatment.

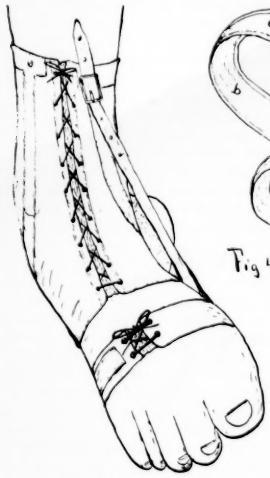

Fig 3

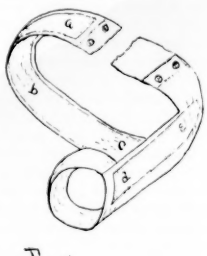

Fig 4.

Fig. 3.—The strap (d) is to fasten into the buckle (e) of the ankle support, and, when tightened, draws the foot into a flexed and adducted position. In some cases it may be of advantage to incorporate a piece of elastic webbing into the strap. The strips of spring brass fastened to the apparatus by their leather covering serve to stiffen it and cause the pull of the apparatus to be applied at the right points.

Fig. 4.—A modification of the waist band that can be used when hallux valgus is present. The band (a, b, c) around the waist of the foot is as in Figures 1 and 2, but there is a prolongation (d, e), along the inner side of the big toe. This prolongation is strengthened by a strip of spring brass and corrective force can be brought to bear on the toe by bending this strip.

In order to overcome this faulty position during sleep and to aid the process of growth, the apparatus, outline drawings of which are here shown, has been devised.

By a slight change in the apparatus it can be used to great advantage as a night support for clubfeet. This is done by simply changing the strap and buckle to the outer side. Tightening the strap will now tend to hold the foot in a flexed, pronated or abducted position, just the reverse of the position in ordinary equinovarus.

Hair Dye Poisoning.—Dr. J. H. Mackay, Norfolk, Neb., reports a case in which the eruption extended beyond the scalp to the face, shoulders and arms, with itching, burning, redness and puffing. The eruption was similar to ivy poisoning, but with larger individual pimples. There were constitutional symptoms suggestive of arsenic poisoning. The diagnosis was confirmed by three attacks during a period of six months, concurrent with the application to the hair of "Mrs. Potter's Pure Walnut Juice."

TWO CASES OF SUBPHRENIC ABSCESS

W. E. THOMPSON, M.D., AND B. K. ELLIS, M.D.
GREELEY, COLO.

The following case is reported because we believe, that, even in the face of a rapidly increasing literature, it is appropriate to draw attention to the not infrequent condition of subphrenic abscess following appendicitis and to the condition of empyema and lung abscess following subphrenic abscess, even when an appendiceal abscess is drained and occasionally after the removal of a non-suppurating appendix.

Patient.—W. P., aged 26 (family history immaterial), was operated on at Omaha for appendicitis, two years before the date of first examination. He believed it only a drainage operation. A year and a half later an abscess opened externally in the right iliac region. The patient was shortly removed to a hospital, where two attempts were made to close the resulting fistula. At this time there was a swelling of the lower part of the chest on the right side. Later he began suddenly to cough and to expectorate large quantities (two to four pints) of very foul pus, the swelling in the liver region gradually subsiding.

Examination.—March 23, 1909: Patient admitted to the hospital, emaciated, dyspneic, with rapid breathing, no expansion of the right thorax. Temperature, 102 F.; pulse, 110; bulging of the right thorax, dulness extending up into the axiliary space, area of dulness changing with posture. Amphoric breathing and other cavity signs of right lung.

Diagnosis.—In the order of occurrence: Appendicitis, subphrenic abscess, empyema, lung abscess.

Operation.—March 23, under ether, which the patient took poorly, resection of sixth rib was done, evacuating about one quart of pus; breathing was easier. By a linear incision in outer border of right rectus, we opened the subphrenic space and demonstrated a sinus leading from the appendix to the right lung, through which air escaped in breathing as it also did in the thoracic opening; drainage of openings was effected.

Postoperative History.—At no time after operation was there any drainage through the old sinuses in the appendiceal region. On the second day the drainage was removed from the subphrenic space, with closure of the wound twelve days after operation. The thoracic discharges gradually lessened until on April 7 the discharge had ceased and the wound about closed. The patient was up, gaining in weight; his cough was negligible.

The next case is reported because of the long train of symptoms, and widely separated septic conditions that may follow a seemingly mild and non-suppurative appendicitis after apparent recovery; also because of the obscure symptoms present due to the small amount of pus and its many locations; and because of the fact that the pus must have been present for a long time and the tissue reactions excellent to produce such a completely organized pus.

Patient.—W. F., male, aged 28 (family history not obtained; early history negligible), in 1904 worked in the tropics where he had a "fever" which left him with large stellate scars on the back. He complained of not having felt well for some time before the examination. He could remember no very severe pain but some colic.

Examination.—March 18, 1909: The patient was a muscular male, not markedly emaciated, with face flushed, rapid breathing, rapid pulse, temperature 102 F., an area of consolidation in the left upper lobe of lung, and no marked signs of extensive pneumonia. The sputum contained Friendlander's bacillus and numerous cocci; it was slightly blood-stained. We made a diagnosis of pneumonia.

Course of Disease.—The patient next morning was removed to the hospital, at which time his temperature was 95 F., pulse 110; the other conditions were unchanged. The patient had had no chills and gave no history of chills but had chilly sensations. During the next day he complained of severe pain in the diaphragmatic area on the left side. Next day the pa-

tient looked markedly worse; the septic appearance was increased. There was at this time (March 24) some dulness and some pain over the gall bladder, and appendix, general rigidity of the abdomen, and much tenderness over the eighth, ninth and tenth ribs left laterally. Blood count at this time gave 37,000 white blood cells and 95 per cent. polynuclears. The urine was reduced in quantity; the urea output markedly reduced; very large percentage of albumin, considerable bile. The sputum was unchanged. On more careful examination of the chest it was concluded that the left lung was collapsed; there was tympany to the third rib, dulness above, metallic tinkling and amphoric breathing over the base. The diagnosis was revised to disease of either gall bladder or appendix, subphrenic abscess and pyopneumothorax.

First Operation.—Under ether, March 22, the abdomen was opened; the gall bladder was found normal, and the appendix inflamed. There were recent and old adhesions and general peritonitis; the omentum was glued to the parietal wall. No abscess was located. There was some serosanguineous fluid in the pelvis. The appendix was removed and the wound closed. Aspiration of the thorax gave negative results, so the chest was not opened.

Second Operation.—The next day, the septic symptoms becoming worse, it was deemed proper to explore the left subphrenic space and left chest further. The patient being unfit for a general anesthetic, a diagonal incision was made beneath the eighth, ninth and tenth cartilages. The subphrenic spaces were explored but no pus cavity found. Aspiration of the chest showed a few drops of liquid pus. A rib was resected and two drams of thin, odorless pus was turned out.

The patient died next morning at 10 a. m.

Autopsy.—The left lung was collapsed; there was an area of healed tuberculosis in the left apex; no free pus in the pleura, but the lung covered with organized pus so adherent that it was with difficulty removed; the same condition existed between the lobes. There was pus of the same character in the anterior and middle mediastinal spaces; the mediastinal glands were enlarged but not suppurating. The pericardium was adherent and purulent with the same kind of pus; the right lung was about normal, but beneath it, lying on the diaphragm, was a small amount of organized pus. The left subphrenic space contained two or three drams of thick organized gelatinous pus, as did the right subphrenic space; there was no abscess cavity and no marked adhesions. The right kidney space at the upper pole contained similar pus; no stone or pus was found in the kidney; both kidneys were enlarged and bile-stained; the capsule stripped easily. The liver was enlarged, otherwise normal. The stomach was normal except some adhesions in the gastrohepatic area; on its anterior surface was an old scar of a healed ulcer; it had no adhesions about it and did not show on the outside to either inspection or palpation. The duodenum and gall bladder were normal. The pancreas was somewhat sclerotic, there was no hemorrhage or abscess. There was nothing in the lower abdomen but adhesions and seropurulent peritonitis.

From the fact that there had been an old appendicitis and that no other source of pus was found and that pus was in the subphrenic space on both sides and in the right kidney space, we are forced to conclude that there was, first an appendicitis with insignificant symptoms and without suppuration causing a subphrenic abscess, and later a general peritonitis secondary to the abscess with lymphatic infection to the lung. Eisendrath in an article in 1908 speaks of this condition but found but six cases of left subphrenic abscess due to appendicitis.

The time consumed in developing such widely disseminated foci and pus of the organized quality must have been considerable. Unfortunately no bacteriologic examination was made of the pus.

DARK-GROUND ILLUMINATION WITH ORDINARY MICROSCOPE EQUIPMENT

CHARLES GOOSMAN, M.D.
CINCINNATI

The interest in the *Spirochæta pallida* has brought the methods of dark-ground illumination into prominent use for practical purposes. The following is a method of securing this form of illumination, without the aid of special apparatus. The only things needed are a microscope-stand fitted with an Abbé condenser of 1.20 N. A. or 1.40 N. A.—focusing screw for the condenser—a swing out ring below the condenser (such as is fitted to most microscopes, for holding a blue glass disc), 16-millimeter and 4-millimeter objectives, the latter preferably of low aperture (0.65 N. A.), although the one with a higher aperture will do. The illuminant may be a simple one-inch flat-wick oil lamp, although a high power single glower nerust lamp is very much better. Dark-ground illumination is easily obtained with low power objectives, therefore it is best to practice with the 16-millimeter lens before using the higher power necessary to distinguish the spirochete,

Cardboard center-stop for use in dark-ground illumination.

following the directions given below:

Using the 16-millimeter objective, take a slide of sedimented urine, or scrapings from the mouth, containing epithelial cells. First focus the object, then focus the condenser until the image of the light source (the flat side of the flame from an oil lamp, for instance) is seen in the field with the object. Provide a center-stop cut out of cardboard or heavy dark paper like the diagram—a circular disc, having a portion between the rim and the center cut out, as shown by the unshaded part. This kind of diaphragm comes with most microscopes, but can be readily made. Several such discs should be cut out, leaving central stops of different sizes. The outside diameter of the disc, of course, must fit the turn-out ring that is placed below the condenser. With the object and the light source both in focus, as stated above, put a small disc under the condenser. If that does not completely darken the field, use a larger disc, and finally alter the focus of the condenser a trifle until the field is black, and the objects stand out brilliantly. This method, with the 16-millimeter objective and high ocular facilitates the search for casts. When one is found, merely swinging out the ring carrying the center-stop brings direct illumination into use.

It should be added that when using dark-ground illumination the iris diaphragm below the condenser should be wide open to start, and then it can be partially closed, if necessary, to make the field darker. It is easy to get a dark-ground with the low-power objective, but when using the high power the difficulties increase. The best method is first to put a large drop of cedar-

oil on the condenser and put the slide in contact with the oil. This slide may have a drop of syphilitic serum, or, for learning the method of dark-ground illumination, one may take a drop of stale urine or sewage, which is loaded with bacteria. Focus the object with the low power, then focus the condenser so that the image of the light source (say the edge of the flame) is on the same plane as the object, taking care that the cedar-oil maintains the connection between the slide and condenser. If the oil will not fill the gap, use a thicker slide, or use two thin slides, with a drop of oil between them, and another drop between the lower slide and the condenser. Now put the 4-millimeter objective on the microscope, focus the object with a small iris diaphragm, then open the diaphragm and put one of the center-stops under the condenser. Now change the focus of the condenser slightly if necessary, or shift the mirror a little, until the bacteria or other objects are bright on a dark background. Of course, it may be necessary to try several sizes of center-stops below the condenser, but once a certain size is found to work right, that one can be used regularly with that objective. I have used the above described method with a Leitz No. 7 objective, as well as a Spencer 4-millimeter, and while the results are not so good as with a reflecting condenser (on account of chromatic aberration), it has the merit of requiring no extra apparatus. My own preference, in searching for spirochetes, is to use an apochromatic dry objective and an achromatic oil-immersion condenser of English make, but an ordinary outfit will do the work fairly well.

To get the best results from any apparatus, one should know the principles underlying its use, and to get a good exposition of the general principles of dark-ground illumination, the books by Spitta and by Wright on microscopy are very valuable. But it is well to mention here that several amateur microscopists (that is, not medical men) of England, than whom there are no more skilful manipulators, have emphasized the danger of spurious images from dark-ground illumination. This does not apply to the spirochete, so much as to the other objects that may be viewed by this method.

1209 Walnut Street.

ACUTE CHOLECYSTITIS COMPLICATING TYPHOID FEVER

REPORT OF THREE CASES, WITH OPERATIONS

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BIRMINGHAM, ALA.

The infrequency of reported cases in which cholecystitis has been observed as a complication of typhoid fever would lead one to believe this condition extremely rare, or that it might not have been looked for with the same vigilance as other complications. The post-typhoid cholecystitis, with at times calculus formation, has for some time been recognized as a frequent sequel of typhoid fever. Many of the cases must have been the result of an acute cholecystitis occurring during the attack of typhoid, the acute symptoms subsiding, leaving a chronic cholecystitis present. These patients with chronic cholecystitis are often operated on and the presence of the *Bacillus typhosus* demonstrated months or years after the attack of the fever. Then, if many survive the acute cholecystitis, which very likely resulted from the typhoid attack, it is quite reasonable to think that there are many who die from this cause during the course of the fever.

I believe that acute cholecystitis, of sufficient severity to demand operative procedure, is of far more common occurrence than has heretofore been supposed, and the following cases may, therefore, be found of interest:

CASE 1.—*History.*—The patient, Mrs. S. B., aged 38, had had the usual diseases of childhood; otherwise she had always been healthy except for some stomach trouble during the previous six or eight years. She was taken ill on May 31, 1908, with pain in the abdomen, diarrhea and headache. She had complained of headache for the previous ten days, and had had some pain and tenderness in the abdomen, no appetite, and slight diarrhea.

Examination.—The tongue was red; the lungs normal; the abdomen slightly distended and tender. The spleen was enlarged; the temperature 100; the pulse 90. Blood examination: white blood count, 3,800; red blood count, 4,500,000; Widal negative; hemoglobin 95 (Tallquist). The urine was negative. Diagnosis, typhoid fever.

Course of Disease.—June 8: Spleen very much enlarged; white blood count 4,200; Widal positive. Temperature had continued to rise until at this time it was 103 to 104 in afternoon. Rose spots were very abundant. This case ran a course typical of typhoid fever for five weeks. The temperature and pulse became normal, remaining so for several days, when the patient again had a rise for several days. At this time the leucocyte count was 4,000. The relapse lasted for several weeks and had about reached the normal on July 31; then the patient had a severe pain over the region of the gall bladder; the temperature rose to 105, the pulse 170 to 180. There was vomiting; the facial expression became very anxious; there was considerable tenderness over the region of the stomach and gall bladder. The blood showed at this time 11,000 leucocytes. (No differential count was made.) Diagnosis of a cholecystitis with perhaps perforation was made. I called in Dr. Lull, who concurred in this, and while the chances from operation did not look very encouraging we earnestly insisted on this and gained the patient's consent after a few hours' wait. At this time (five hours later) the leucocyte count had risen to 15,000, which was about 11,000 increase from a few days previous.

Operation.—The patient was placed on the operating table about ten hours after the first pain was felt. I made an incision over the gall bladder, and found this organ very much distended. On the fundus was a small necrotic area through which the very thick, dark-looking bile was being discharged. This bile was of the consistency of jelly, which accounts for the gall bladder not entirely emptying itself into the peritoneal cavity. Cholecystotomy was performed, using a rubber tube covered with a cigarette drain. I closed the gall bladder around this with a purse-string suture. The entire operation was completed and abdomen closed in eighteen minutes. The patient's condition seemed no worse than when the operation was commenced (which was bad enough). The patient was given hypodermoclysis on the table, and after the operation saline enemas, strychnin and spartein sulphate were given every three hours. In eighteen hours the temperature was 98.6, pulse 100, and the patient made a rapid and uninterrupted recovery. The gall bladder discharged no bile until after the fourth day, when bile was freely discharged.

CASE 2.—*History.*—J. D. Almond, aged 23, was brought into the hospital on Sept. 1, 1908, the sixteenth day of typhoid fever. His previous history was good until the development of the present attack. When admitted to hospital the patient was suffering with severe pain over the gall bladder region, but had not complained of this until put on train to be brought into hospital.

Examination.—The eyes were normal; the tongue red and very dry; the heart and lungs normal; the spleen very much enlarged. There was tenderness over the gall bladder. The temperature was 103; the pulse 128. The abdomen was distended and rigid. The patient was nauseated and had vomited

a few times before admission. The Widal test was positive; white blood count 16,000. Diagnosis was made of cholecystitis complicating typhoid fever.

Operation.—The patient was carried to the operating room and an incision made over the gall bladder. This organ was found very much enlarged and distended. I opened the gall bladder, which was found to contain thick, dark bile. No stones were found. A rubber tube wrapped with cigarette drain was inserted, the edges of the gall bladder turned in and the tube retained by a purse-string suture. No bile was discharged for two days; then it began to discharge freely through the draining-tube. In twelve hours the temperature had dropped to 99.4; the pulse was 84. The patient made a nice recovery. Culture from the bile was examined and a motile bacillus found.

CASE 3.—*History.*—Mrs. S. D., aged 15, was admitted to the hospital on Sept. 10, 1908, with diagnosis of typhoid fever. Her condition mentally was very bad and the history had to be obtained from her husband and the doctor bringing the case into the hospital. The past history could not be secured beyond the present illness. The patient had been ill one month; had been constantly in bed only for the previous five days, but had been having fever for two weeks past; the physician stated that the temperature ran up to 104 to 105 each afternoon and about 102 in the forenoon (when he had seen her). The patient was four months pregnant. She was vomiting about once or twice each hour.

Examination.—The patient had a very anxious facial expression. The tongue was very red around the edges, with a dark coat, and trembled very markedly when protruded; it was hard to get the patient to protrude the tongue on account of her bad mental condition. The chest seemed normal. The spleen could not be felt on account of the distended abdomen and extreme tenderness. There was much tenderness over the gall bladder and some tenderness over the appendix and uterus. The patient seemed in great pain. The blood examination showed white blood count 4,000, hemoglobin 40 per cent., Widal very positive. The pulse was 140, the temperature 103.4. The urine showed albumin present; there were abundant hyaline and granular casts. The diagnosis was made of typhoid fever complicated by suppurative cholecystitis.

Operation was advised, but the husband was unwilling to have the patient operated on until her mother could be consulted. We offered no encouragement and did not insist on operating. The mother did not arrive until the day following, and gave her consent to operation. At this time the patient's condition did not seem much changed for the worse, as it had been about as bad as possible on the day of admission. According to the nurse's notes, between 7 p. m., September 10 and 7 a. m., September 11, the patient was delirious, suffering great pain in the abdomen. She had five liquid movements during this period. Three-quarters of a grain of morphin sulphate was given by hypodermic injection during the night. It will be seen that we did not have a good subject for a surgical operation. The temperature at this time was 104.6, pulse 132, white blood count 10,000.

Operation.—An incision was made over the gall bladder, exposing the firmly adherent omentum covering the organ. The omentum was dissected away, exposing a very much distended gall bladder. The liver was speckled or nutmeg in appearance. The gall bladder, on being opened, was found to contain a thick, tarry bile mixed with a yellowish discharge, which proved to be pus. The gall bladder was drained after a culture was taken for bacteriologic examination. On account of pain in the lower abdominal region we considered it best to explore this region. An incision was made in median line; the uterus, being brought into view, presented a very unhealthy appearance. The question of a living or dead fetus was undecided, and considering that we had perhaps a toxemia of pregnancy, a dead fetus and a very unhealthy uterus, we decided to remove it. The appendix was normal. The time consumed in removing the uterus, draining the gall bladder and closing both incisions was eighteen minutes. The patient left the table in about as good condition as when she came on.

Postoperative History.—On the third day there was a normal movement from the bowels; the temperature and pulse began to fall until on the eighth day after the operation the pulse had reached 100 and the temperature 100.8 by rectum. The bowels were acting nicely and the prospects for continued improvement seemed bright, when the patient's condition became suddenly worse. The temperature per rectum was 98, the pulse 144, and there was great pain in the right iliac region. Drs. Johnson and Whelan were called in and the diagnosis of perforation was made, but on account of the desperate condition of the patient operation was not advised. The diagnosis was found correct at autopsy, the perforation being about four inches from the ileocecal junction. The report on the gall-bladder findings was a mixed infection of a motile bacillus and streptococcus.

109½ North Twentieth Street.

Therapeutics

INFANT FEEDING

In this age of bottle-fed infants, milk foods, substitute foods, pasteurized milk, and modified milk, it may be well to ponder some on the facts presented in a paper by Dr. Joseph E. Winters, of New York, Professor of Diseases of Children at the Cornell University Medical College. It may be well to present his findings in the form of aphorisms.

1. Infant mortality has only lately decreased, while the mortality of older individuals has been continuously decreasing.

2. A breast-fed child in the worst surroundings has an immunity from disease never found under any condition of substitute feeding.

3. The mother's milk is very rich in fat, containing 5 per cent. (together with 7 per cent. of milk sugar, and 1.25 per cent. of proteid) and, other things being equal, the fatter the child, the healthier it is.

4. The extra amount of fat which the child receives from its mother's milk over and above that from artificially prepared foods is absolutely necessary for the maintenance of its requisite heat, and when it is remembered that heat is largely lost by radiation and evaporation from the surface of the body, and the child having relatively three times as much surface for radiation and evaporation as the adult, the importance of maintaining the fat content of its food is at once seen.

5. The extra amount of fat is also needed for the child's nutrition on account of the rapid growth of brain, nerves, and bone marrow, all of which tissues contain large amounts of fat.

6. Separator (or centrifugal) cream is prepared from whole milk by rapid revolutions of the separator, and is consequently lower than gravity cream in all of its constituents except fat, and would be more correctly named if called centrifugal or separator butter fats instead of cream. Also, by the excessive pressure the fat globules are no longer free, but are so crushed together that when added to modified milk they form masses of fat that can not be well digested by the child. Such conglomerate fat which must reach the intestine for digestion, "does not readily pass through the narrow pylorus of the infant. Such fat is, then, as indigestible as cheese."

7. "Centrifugal cream is almost proteid-free and nearly destitute of growth constituents, hence the only food value it can have is as an addition of fat to other milk."

8. The upper half-ounce of *gravity* cream contains 3 per cent. of proteid, and gives fat globules so loosely

coherent as to be readily emulsified, and hence it does not form a tough curd in the child's stomach as does separator cream. Therefore, the upper half ounce of gravity cream from milk of cows "other than Jerseys and Guernseys," whose milk is too rich in fat, makes the best basis for an artificial food for the infant.

9. "There is a definite and unfailing relationship between growth and the percentage of proteid in milk. The calf doubles its weight in forty-seven days with 4 per cent. of proteid in milk; the lamb in ten days with 7 per cent.; the puppy in eight days with 8.25 per cent.; the kitten in five days with 9.33 per cent.; while a child grows most rapidly during its first week of life, at about which period the secretion of the mother's breasts contains 8.5 per cent. of albumin. The high protein, non-coagulable, absorbable without digestive effort of mother's milk is impossible of duplication."

10. "The mortality of infants under one year is so great that an equally high death rate is not again recorded until the age of eighty years, and 75 per cent. of these deaths occur in the first six months. Such a mortality would not occur were all infants breast-fed, and maternal nursing even shows a lower mortality than with wet nursing, showing that the mother's milk is peculiarly adapted to her own infant."

11. "Calcium phosphate, magnesia, sodium and potassium chlorid in greater quantity in colostrum than in milk of later period is peculiarly adapted for cleansing the child's intestines of the perilous meconium."

12. As the child's stomach rapidly enlarges and the pylorus increases in size, after from six weeks to two months, the child can better digest properly modified cows' milk.

13. At the end of this period, six weeks to two months, it is possible to modify cows' milk to simulate mother's milk, but before this six weeks' period it is almost impossible to produce a food that can at all equal, in its gradual modification, Nature's own method of feeding and nourishing the young infant.

14. While it is necessary for the welfare of the infant that it receive its mother's milk, it is also for the best health of the mother that the child should nurse. In about six weeks after delivery the large, heavy uterus should have involuted to the normal size of the non-pregnant uterus. A powerful aid to such proper involution is the reflex contraction which takes place in the uterus when the infant grasps the nipple. If the uterus receives this reflex stimulation to contraction from eight to ten times every twenty-four hours, and such reflex stimulation lasts from fifteen to twenty minutes, and such functions and stimulations are normal, it may be easily seen how one set of generative organs may not return to perfect health if the other set is not properly utilized.

15. If it is thoroughly explained to the mother that during her normal period of rest after confinement, viz., six weeks, that the child *extra utero* is just as much a part of her as the child *intra utero*, and that after these six weeks, if it seems advisable, the child may be weaned and artificial food given, she will certainly cooperate for her own and the child's health, and will nurse her own baby.

16. "The milk of every healthy mother agrees with her child." The child should nurse slowly if it will, and should obtain its food with some effort on its own part, as vigorous nursing stimulates the child's secretions and hence is much better than for the milk to flow readily, as from a bottle.

17. "Never give water from a bottle to a new-born child—refusal to nurse is certain to ensue. Water may be given from a spoon twice the first day. It must not be given the second. Much water, even from a spoon, prevents vigorous nursing."

18. The green stools due to the meconium are often incorrectly believed to be because the milk disagrees, and calomel or castol oil are needlessly given, or the child is needlessly weaned. Also, "officious discussions, before the mother, that her milk probably disagrees with her own child on account of some apparent colic, sleeplessness, or a little vomiting, or a little mucus in the stools, has caused the loss of many lives by making the inexperienced mother needlessly wean her child."

19. After the child has nursed to its fill, it should be placed in a quiet, darkened room, where it may uninterruptedly sleep until it is again ready to nurse. Too much handling of the young infant interferes with its digestion and its nutrition.

20. Winters believes that, as the maximum gain in breast-fed children is during the second month, and, as (he thinks) the proteid and minerals in the mother's milk are inadequate for the proper growth of the child after the second month, that Nature did not intend the prolongation of lactation to eight or ten months.

21. After the first month Winters would give the breast-fed child two bottles of modified cows' milk every twenty-four hours, at such times as to allow the mother uninterrupted rest at night, and an occasional freedom during the day. Such a method makes weaning easy, at any period.

22. "Pasteurization dissolves the organic union of mineral and proteid in milk, and thus fails to present the baby with normally constituted organic food. It is a recourse to palm on a credulous public milk unfit for food."

23. "An infant is not endowed with the ability to digest vegetable foods; hence foods from barley or any other grain are not adapted to the infant's needs. Of 1,000 children fed on various infant foods, 780 more died in the first year than of 1,000 breast-fed children. Infant physiology, physiologic chemistry, and experimentation demonstrate that the giving of any food other than modified raw milk to an infant under six months is perfidious. In Germany, when an infant under one year dies the law requires the mode of feeding to be stated on the certificate of death. Barley, dextrinized cereal, malt soup, all adventitious and foreign accessions to modified milk, enchance mortality."

"When the order of nature changes; when the functions of heat, respiration and nervous energy in the new-born can be accomplished without fat as a source of heat; when the blood-forming, heat-producing and force-producing structures contain no fat; when women's breasts secrete barley gruel, dextrinized cereal, malt soup, wheat flour, sour milk, and fat-free milk, these anomalous and strange feeding whims will be founded on some bottom of reason."

ASTRINGENT MOUTH WASH

The following is a suggestion in the *Druggists Circular*, January, 1909:

R.	gm. or c.c.	
Tincturæ myrrhæ	75	fl.℥iiss
Tincturæ cardamomi compositæ	20	fl.℥i
Tincturæ cinchonæ compositæ	75	or fl.℥iiss
Spiritus caryophylli	15	fl.℥ss
Eau de Cologne, ad	200	ad. fl.℥vii

M. et Sig.: Add a teaspoonful to a glass of warm water, and use as a mouth wash.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[*For other information see second page following reading matter*]

SATURDAY, MAY 15, 1909

THE PANCREAS AND THE LIVER IN DIABETES

Although it is now nine years since Opie first described the occurrence of definite lesions in the islands of Langerhans in diabetes, we are still uncertain as to just what relation these structures and their pathologic alterations may have to diabetes. While there are those who have gone as far as Dale and denied the very existence of the Langerhans islands as independent structures, and others have disputed their relation to carbohydrate metabolism, the balance of evidence and the weight of opinion are now altogether in favor of considering them as specific organs of internal secretion which are concerned in carbohydrate metabolism. Just what part they play in this process, or how they do it, are admitted to be unsettled problems. Granting the fundamental importance of these structures in the utilization of sugar by the body, their connection with diabetes is to be assumed, and the finding of lesions in them in diabetes would settle the matter were these lesions more constant. However, the results obtained by different observers have been so much at variance that it has been extremely difficult to draw satisfactory conclusions, and therefore some pathologists are more than a little skeptical as to the importance of the lesions that have been described.

When we find that in the pancreas of a person dead of diabetes practically all the islands of Langerhans have been replaced by a hyaline substance or by scar tissue, without other lesions of the pancreas being present, we have every reason to suspect these lesions of responsibility for the defective carbohydrate metabolism. But when we find such distinct changes present in but a small proportion of all cases of fatal diabetes, and find in a very considerable proportion only slight or no distinct pathologic alterations whatever in the pancreas, the question of the exact significance of the observed lesions becomes a matter of doubt. And when we observe that in still other cases the islands of Langerhans, instead of evidencing impairment of function are distinctly hypertrophied and apparently over-functioning, the situation becomes almost hopelessly confused.

These being the facts at present, it is evident that we need to have a careful correlation by unprejudiced observers, of the conditions present in the patient during life and the changes present, not only in the pancreas, but in the other tissues after death.

Statistical studies are here of importance, and one of the most extensive collections of cases yet made has been recently published by Dr. R. L. Cecil.[1] In 1902 Sauerbeck collected from various sources reports of 176 cases of diabetes in which the condition of the islands had been noted, in 62 per cent. of which lesions of one kind or another were observed. Cecil's report on 90 cases has much more value, however, for these cases have all been studied by one observer and are therefore better correlated and more uniformly analyzed. Of the 90 cases the pancreas was found normal in but 11, although it must be admitted that in many of the 88 per cent. of abnormal pancreases the lesions were not very extensive; and the evidence in favor of the causal relationship of the islands of Langerhans seems to be made stronger by this paper. Nevertheless the occurrence of so many cases in which the changes in the pancreas are but slight or entirely absent leaves open the question as to whether the pancreatic lesions may not be the result rather than the cause of the diabetes. Cecil believes that the variety of lesions found in the pancreas is against the view that they are all the results of a common cause, diabetes. But in the cases in which no pancreatic lesions are present, it must be admitted that here, at least, the diabetes is not of pancreatic origin, and presumably the same is true in many of the cases in which pancreatic lesions are present but of slight degree. Indeed it seems probable that the discrepancies in the findings in the pancreas in diabetes will serve to bring out the fact that diabetes may often have other than a pancreatic origin, and should stimulate the search for pathological conditions elsewhere in the body.

So strongly has our attention been focused on the pancreas lesions that it is possible that we have overlooked other equally important changes. Indeed, Rössle[2] believes that a diagnosis of diabetes can be made with more certainty in the autopsy room on the basis of the hepatic than on the pancreatic changes. The liver of diabetes is enlarged, of a rosy color, and with a transparent or homogeneous appearing parenchyma. While the liver normally represents from 2.3 to 2.75 per cent. of the body weight, in diabetes it is from 2.9 to 4.1 per cent., averaging 3.54 per cent. Pflüger has also observed that in dogs with experimental pancreatic diabetes the liver is enlarged, although with a corresponding degree of emaciation from other causes the liver is much atrophied. Microscopically, the diabetic liver shows interesting changes, including constant fatty changes in the stellate cells of Kupffer, and the nearly constant presence of peculiar, homogeneous refractile bands along the capillaries. The latter appearance seems to be specific for and characteristic of diabetes.

In view of the essential importance of the liver in sugar metabolism the hepatic changes of diabetes would seem to be fully as significant as the pancreatic lesions,

1. Jour. Exper. Med., March, 1909, 266.
2. Verh. deut. pathol. Gesellsch., 1907, xi, 334.

and worthy of the same careful study. It may be that a comparative study of the changes in these two organs, correlated with the clinical and chemical manifestations of selected cases, will be able to throw new light in some of the obscure places.

SCHOOL HYGIENE

The remarkable wave of interest in preventive medicine and sanitation which is making itself felt in many ways among the laity can assuredly find no better outlet than when directed into the channels of school hygiene. Such questionings of heart and rattling of dry bones as are now taking place in the whole field of education from the college to the kindergarten has not been witnessed for at least a generation. It is well that it is so. To take children from their homes and set them tasks which may injure irreparably their eyesight or their capacity of spontaneous interest, while placing them under conditions in which various infectious diseases may be more readily contracted at the same time that general bodily resistance is decreased by overheated rooms, rebreathed air, mental fatigue and cramped attitudes does not seem to constitute the last word of civilized man on the proper rearing of his offspring. The hygienic dangers involved in bringing up children *en masse* need to be all the more carefully scrutinized when we find that not a few modern writers are expressing grave doubts about the real value of much of our present educational "system" and are boldly suggesting that the whole outfit might be demolished with advantage.

In any case every sane parent will welcome the assistance and counsel of the numerous agencies now at work to improve the physical condition of American school children. The work of the strong and enthusiastic American School Hygiene Association now in its third year, the newly organized special society for the study of the long unguided — some would say misguided — development of athletics, the astonishingly effective and popular work represented by the Playground Association of America are some of the overt manifestations of this deepened interest. New journals are being started, medical school inspection is being greatly extended and elaborated, and conferences, such as the recent Massachusetts Dental Hygiene Conference, are being held on special topics. Is it too much to hope that out of all this whirr of committee meetings, sound of many voices and tons of printed paper some good will come? We are at all events gradually acquiring that precise definite information about the mental and physical qualities of school children and the necessities of the common school life without which all agitation for social betterment is mere beating of the air.

To illustrate with a concrete example the sort of inquiry now being undertaken by competent hands: A thorough judicial survey has recently been made by Professor Burnham[1] of the scanty evidence concerning the best division of the working day for school children. He points out that just as we do not know whether our usual custom of taking our sleep in one dose and our food in three doses is hygienically the best, so we do not know whether the most effective daily work can be done by confining it all to one period or dividing it into several.

Individual habits and social customs usually settle these matters for the adult, but what habit is it best to develop in the child? The general results obtained in Professor Burnham's study of the question, although admittedly based on very insufficient data, point to the conclusion that in spite of the fact that in the afternoon there is usually decreased ability to work and a general confusion and dulling of the powers, a single long session, at least for children in the grammar grades, is but driving out the devil by Beelzebub. There will, we think, be general agreement among physicians that the one session plan is almost sure to be detrimental to the health of a large number of children. The whole question illustrates the complexity of the school problem on its hygienic as well as on its pedagogic side, and emphasizes the importance of genuine investigation in this field.

THE PROBLEM OF THE HABITUAL DRUNKARD

To the courts and the public, the drunkard is not so much a problem as a wearisome and never-ending nuisance, forever being shuffled hastily out of the way, and perennially cropping up anew. Thus, in our large cities, thousands are arrested, only to be immediately discharged; and neither the mechanical process of arrest and discharge, nor the equally mechanical infliction of a fine or a workhouse sentence, has any result other than to prepare the "rounder" to go through the mill once more. This view is well brought out in a recent number of the *Survey*.[2]

"It has been demonstrated after years of experience in this country and abroad," says the *Survey*, "that petty fines and short sentences do not reform the drunkard or protect society." Inebriety, like insanity, can not be perfunctorily suppressed; but systematic treatment has been even more tardily provided for the drunkard than for the lunatic.

Great Britain has tried thoroughly the policy of segregation of inebriates in separate institutions. The Habitual Drunkards Act of 1879 permitted the commitment of inebriates to private institutions on their own application; the Inebriates Act of 1898 provided for the commitment to private or public institutions of persons who repeatedly appear before the courts for drunkenness or for crimes in which drunkenness is a contributing cause. In Massachusetts, Minnesota, Iowa, Con-

1. Hygiene and Physical Education, March, 1909, p. 1.
2. April 10, 1909, xxii, 84.

necticut, Nebraska and Pennsylvania, the habitual drunkard may be committed to an institution for care and treatment on his own application or on that of friends or relatives, much as an insane person may be committed to a hospital; but the three states first named are the only ones which have separate public institutions for the treatment of inebriety.

A bill recently introduced in the New York legislature contains the most comprehensive scheme of treatment for inebriety yet devised—one based on studies of methods in use elsewhere and of conditions existing in New York City, to which the bill applies. A city board of inebriety, complete records, making possible accurate discrimination between different classes of drunkards, and a hospital and medical colony under medical direction, are important features of the plan. First offenders are to be released on probation. Commitment of an inebriate requiring systematic treatment may be made on request of the patient himself or on that of relatives or friends, without appearance in court.

If the New York bill becomes a law, its operation will doubtless furnish much instruction and its success great encouragement to those in other states who may desire to deal more thoroughly with the problem of inebriety.

THE MICRO-ORGANISM OF WHOOPING COUGH

The etiology of whooping cough has long been an unsolved problem. Many attempts have been made to discover some micro-organism in association with it, but hitherto the results have been very contradictory. In 1906, however, Bordet and Gengou[1] described an organism which they obtained in pure culture and offered considerable evidence to show that it was the organism causing the disease. Their results have recently been confirmed by Klimenko.[2]

The organism they describe is a small, short bacillus, with rounded ends. It stains feebly and shows polar granules with carbol methylene blue. It decolorizes by Gram's method. It is non-motile, aërobic, and grows very slowly and feebly when first isolated, and only on a special medium they devised, composed of glycerin, potato, gelatin and blood. But after several generations it will grow fairly well on other media, and does not require hemoglobin, unlike the influenza bacillus, which it somewhat resembles.

It occurs in the sputum in large numbers, and almost unmixed with other organisms at the onset of the disease, during the catarrhal stage and for a few days after the whoop appears. It is only at this stage that it can be obtained in pure culture. As the disease progresses, other organisms appear, especially the influenza bacillus, which outgrow it, and eventually it becomes difficult to find it, even in stained preparations. It has been cultivated from the blood and lungs of fatal cases in man. The blood in convalescent cases agglutinates the organism, but rather feebly. Using a culture of the organism as an antigen, specific antibodies have been demonstrated in the blood serum of patients by the complement-fixation test.

In monkeys and young dogs by intratracheal injection a disease has been produced similar to the human type, except in the absence of the whoop; normal animals, by simple exposure in a cage to an infected animal would readily contract the disease. The organism was always recovered from the nasal discharge of these animals, and in some cases from the lungs or blood at autopsy.

Out of 76 human cases the organism was cultivated only in the 5 early cases. But it was demonstrated by stained preparations in 64, or 80 per cent. of all the cases. It was never found in 50 normal children, nor in 31 cases of other acute respiratory infections.

On the whole, the evidence in favor of this organism as the etiologic factor in whooping cough seems rather convincing. It would seem to be of considerable practical importance as well in the early diagnosis and prophylaxis of the disease, for, although it is only at the onset of the disease that the organism can be readily demonstrated, it is just at this time that the diagnosis is most important and most often in doubt.

1. Ann. de l'Inst. Pasteur., xx and xxv.
2. Centralbl. f. Bakt., etc., I Abt. Orig., xlviii.

THE NEW MARYLAND LIBRARY BUILDING

At the annual meeting of the Medical and Chirurgical Faculty of Maryland, held in Baltimore this week, occurred the formal dedication of the new library building which is to form its permanent home. The *Maryland Medical Journal* for May contains an historical article of interest by Dr. A. K. Bond of Baltimore, in which the origin and growth of the society is outlined. Chartered in 1799 for the purpose of protecting the public from quackery and incompetence and of promoting medical culture among regular physicians, the society within thirty years after its organization, in 1830, comprised in its membership every one of the 600 physicians of the state. At this time a library committee was appointed and the beginning of the present collection was made. For a time the library was housed in the office of the member who was appointed librarian. For a number of years the surplus from fees for examinations for licenses afforded the means for increasing the library. Financial difficulties arose, however, and in 1838 the state legislature, at the urgent petition of the "Thompsonians," a medical sect of great activity at that time, passed a law permitting any one who so desired to practice medicine. License fees at once fell off and the library declined with lack of financial support. With the organization of the American Medical Association, however, medical organization in Maryland was

stimulated, and in 1848 a catalogue of the medical library, which was then lodged with the Mercantile Library, was printed and life memberships were established. In 1857 a building was purchased and the library installed therein. The Civil War, however, put a stop to further growth, and until 1870 but little progress was made, although the library continued to exist. In 1870 it was reorganized and has since occupied successively four different locations, each being larger and better than the former one. In 1900 the society considered itself strong enough to undertake the erection of a new fireproof building with accommodations for the library and with a large hall for assembly purposes. After careful consideration, a committee was appointed in 1905. In 1907 a lot was purchased. Ground was broken for the building in August, 1908. The new structure is fireproof, the library containing stacks for 60,000 volumes. There are also three communicating halls for meetings, the largest seating five hundred. The erection and dedication of this splendid new building, which will form a permanent home for the state society, will be a source of great and deserved satisfaction to all its members and can well serve as an object-lesson to other state associations.

THE TRANSMISSION OF GERMS IN MAILS

The postal authorities have sent out a warning to local postmasters in regard to the reception of improperly packed parcels containing dangerous substances, such as disease germs. It is worth while for all who may have occasion to submit diseased tissues or culture specimens for laboratory examination to note that liquid cultures, or cultures of micro-organisms in media that are fluid at the ordinary temperature, may not be sent through the United States mails at all; that solid specimens of diseased tissues, whether moist or dry, may be mailed only to United States, state or municipal laboratories; and that such specimens are admitted to the mails only when packed and indorsed as provided in the regulations of the Postoffice Department.[1] If the postoffice instructions are carefully observed there can be little danger of infection of postoffice employés from this source. It might be desirable to exclude the germs of some diseases from the mails entirely—for example, glanders and anthrax—although it is probably most rare for the mails to be used for the transmission of these organisms. In case of breakage it would be impossible, in a postoffice or mail car, to insure the complete and immediate sterilization advisable. If the prescribed precautions are followed, however, breakage and infection need not be feared. The action of the Postoffice Department is commendable; it is the ounce of prevention against a possible, though not probable, danger.

1. The rules were printed in full in THE JOURNAL, March 6, 1909, p. 791.

Medical News

CALIFORNIA

Personal.—Dr. Warren N. Horton has resigned as city bacteriologist of Los Angeles.——J. C. Thomas has been re-elected president, and Dr. George B. Worthington, secretary, of the Marysville Board of Health.

License Revoked.—At a recent meeting of the State Board of Medical Examiners, the license of Dr. F. Grosshauser, formerly of Lodi, but now a resident of Texas, is said to have been revoked on the ground that his license had been obtained by fraud. The authorities of Texas were notified of the findings.

Antituberculosis Work.—A meeting was held April 27, in the Agnew Sanatorium, for the reorganization of the San Diego Society for the Study and Prevention of Tuberculosis. After the adoption of a new constitution and by-laws, officers were elected. The medical representatives are as follows: President, Dr. Joseph A. Parks; first vice-president, Dr. Fred R. Burnham; treasurer, Dr. Thomas S. Whitelock; directors, Drs. Henry P. Newman, Francis H. Mead and I. Daniel Webster, and advisory board, Drs. Homer C. Oatman, Harry N. Goff, Fred Baker, Harold A. Thompson, D. P. Northrup, R. S. Cummings, Berte V. Franklin, Joseph C. Hearne, Edward Grove, Charles C. Valle and Edward M. Fly.——The California Association for the Study and Prevention of Tuberculosis, at its annual meeting, held in San Jose, elected the following officers: Dr. George H. Evans, San Francisco; vice-presidents, Drs. Edward von Adelung, Oakland, and Fitch C. E. Mattison, Pasadena; secretary, Dr. George H. Kress, Los Angeles, and treasurer, Dr. C. H. Toll, Los Angeles.

State Society Meeting.—The thirty-ninth annual meeting of the Medical Society of the State of California was held in San Jose April 20-22. The attendance was excellent, and general interest was shown in the report to the society of the various matters presented to the last legislature, and the outcome of the much-proposed legislation. A considerable number of bills radically changing the medical laws were introduced in the legislature, but all were defeated. An amendment licensing a limited number of persons to practice "naturopathy" was passed as a compromise measure, and in the future all followers of that cult will be obliged to pass an examination before the board of medical examiners. The eye, ear, nose and throat section of the society devoted almost its entire program to the consideration of otitis media in all its aspects, complications and the means for its relief and cure. A special feature of the meeting was a large pathologic exhibit and the many demonstrations, including rat plague with specimens, and tubercular infection of guinea pigs after injection with milk taken from a milk wagon of the streets of Berkeley. The afternoon of the second and morning of the third day were devoted entirely to lectures on the specimens and demonstrations of "Filaria" by Dr. Herbert Gunn, San Francisco; "Arterial Suturing," by Dr. Henry A. L. Ryfkogel, San Francisco; "Spirochete and the Wassermann Reaction," by Dr. Harry R. Oliver, San Francisco, and "Sporothrix Schenckii," by Dr. Jesse M. Burlew, Santa Ana. In addition to the list of officers which appeared in THE JOURNAL of May 8, page 1503, Drs. H. Bert Ellis and Granville McGowan, Los Angeles, were elected delegates to the American Medical Association.

CONNECTICUT

Good Work Appreciated.—At the annual banquet of the American Therapeutic Society, held in New Haven, May 9, a silver loving-cup was presented to Dr. Oliver T. Osborne, New Haven, by the non-resident members of the society, in appreciation of the faithful work done by Dr. Osborne, and the excellent arrangements made by him, for the meeting of the society.

DISTRICT OF COLUMBIA

Personal.—Dr. Milton J. Rosenau, P. H. and M.-H. Service, was recently operated on for appendicitis.

Election of Officers.—At the annual meeting of the Medical Society of the District of Columbia, April 27, Dr. Thomas N.

McLaughlin was elected president; Dr. James A. Watson, vice-president; Dr. Luther H. Reichelderfer, secretary; and Dr. Frank Leech, treasurer.

Health Office Promotions.—Under the district appropriation bill, passed by congress, several higher salaries were granted to officials of the health department, and a number of promotions recommended. The salary of Dr. William C. Woodward, health officer, has been increased from $3,500 to $4,000 per annum; Dr. Henry F. Sawtelle has been promoted from chief inspector and deputy health officer with a salary of $1,800 to assistant health officer with a salary of $2,000 per annum, and the salaries of the chief clerk and several other employés have also been increased.

ILLINOIS

Personal.—Dr. George M. Peairs, Joliet, sailed for Europe May 4.——Dr. Vernon Holbrook, Peoria, while running to catch a car, April 28, fell and fractured his leg at the ankle. ——Dr. James F. Harris, Ogden, was fired on by an unknown assailant May 31, and wounded in the leg.

Smallpox in Northern Illinois.—An epidemic of smallpox of mild type is reported in Marengo, where 14 cases have been found, necessitating a strict quarantine, closing of the public schools, and prohibition of church services and other public gatherings.

Dinner for Women Physicians at Quincy.—The members of the Women's Medical Society of the State of Illinois will hold their annual dinner at the Newcomb Hotel, Quincy, May 19, at 5 p. m. All women physicians in attendance at the meeting of the Illinois State Medical Society are requested to be present.

Tuberculosis Bill Signed.—The governor has signed the Wright bill which allows counties to purchase and hold real estate to be used as sites for public tuberculosis sanatoria, and gives county boards power to erect and maintain such institutions at the expense of the county. The measure goes into effect July 1.

Chicago

Personal.—Dr. Arnold C. Klebs left May 11, for Geneva, Switzerland, where he expects to spend two years in study and research work—Dr. Ulysses S. Grim sailed for Europe May 4.

Abuse of Medical Charities.—The Chicago Medical Society, in cooperation with the Chicago homeopathic, eclectic and physio-medical societies, the Chicago Bureau of Charities, and the Chicago Relief and Aid Society, are contemplating a dispensary reform movement whereby the various organizations of the city will establish a central investigating bureau cooperating with the charitable organizations in discovering applicants for aid who abuse medical charities. Under the contemplated plan, there will be no delay in furnishing emergency medical service to deserving or undeserving patients, and worthy individuals will be aided as freely and as promptly as before.

INDIANA

Change in Date of Meeting.—Dr. John N. Hurty, state health commissioner, announces that the date of the meeting of the State Health Officer's School has been changed from May 14-15 to May 20-21.

Tuberculosis Notes.—Mayor Bookwalter has notified the Indianapolis Board of Health of his intention to erect a cottage at the new tuberculosis sanatorium now being constructed on the city hospital grounds in memory of his brother, Morton Bookwalter. Four cottages have been provided by the Indiana Branch of the National Red Cross, which were opened to receive patients May 3, and other cottages will be built by the Second Presbyterian Church, All Soul's Unitarian Church, St. Bridget's Church, and Mrs. M. L. Rowe. ——An association has been formed in Frankfort to build a hospital for the treatment of tuberculosis. The officers of the association are Dr. Oscar W. Edmonds, president; Dr. Albert H. Coble, vice-president; W. R. Hines, secretary, and Dr. Charles Chittick, treasurer.

KANSAS

State Board Election.—At the quarterly meeting of the State Board of Health, held in Topeka March 30, the following officers were elected: President, Dr. Charles H. Lerrigo, Topeka; vice-president, Dr. Clay E. Coburn, Kansas City, and pathologist, Dr. Robert S. Magee, Topeka. Dr. Samuel J. Crumbine, Topeka, the secretary holding over for another year.

Personal.—Dr. William E. McVey has been elected dean of Kansas Medical College, Topeka, and Dr. John B. Tower has succeeded Dr. McVey as secretary of the institution.——Dr. Henry A. Dykes, Lebanon, has been appointed a member of the State Board of Medical Examiners.——Dr. William A. Miller, New Cambria, who was stricken with apoplexy early in April, has recovered sufficiently to resume practice.

State Society Election.—The forty-third annual meeting of the Kansas Medical Society was held in Emporia, May 6-8, and the following officers were elected: President, Dr. Oliver J. Furst, Peabody; vice-presidents, Drs. Thomas F. Foncannon, Emporia; John D. Walthall, Paola, and John P. Kaster, Topeka; secretary, Dr. Charles S. Huffman, Columbus; treasurer, Dr. Lewis H. Munn, Topeka, and delegates to the American Medical Association, Drs. Clarence C. Goddard, Leavenworth; Lyman L. Uhls, Osawatomie, and Joseph E. Sawtell, Kansas City. Topeka was selected as the meeting place for 1910.

LOUISIANA

State Society Election.—At the thirtieth annual meeting of the Louisiana State Medical Society, held in New Orleans, May 4-6, the following officers were elected: President, Dr. Charles McVea, Baton Rouge; vice-presidents, Drs. John J. Archinard, New Orleans; Robert M. Littell, Opelousas, and Samuel M. D. Clark, New Orleans; secretary, Dr. Edward M. Hummel, New Orleans (re-elected); treasurer, Dr. Charles C. Bass, New Orleans (re-elected); delegates to the American Medical Association, Drs. Frederick R. Tolson, Lafayette, and E. Denegre Martin, New Orleans, and alternates, Drs. Espy M. Williams, Patterson, and G. Farrar Patton, New Orleans. The next meeting will be held in New Orleans May 3-5, 1910.

MARYLAND

Violation of Vaccination Law.—The cases against two public school teachers of Breathedsville, instituted at the instance of the State Board of Health, in which the defendants were charged with violating the act prohibiting teachers from admitting to school unvaccinated pupils, came up for trial May 1. Both teachers pleaded guilty, and sentence was suspended.

State Sanatorium Dedicated.—The State Sanatorium for Consumptives, Sabillasville, in the Blue Ridge Mountains, was formally transferred to the state May 15. United States Senator John Walter Smith, formally transferred the sanatorium to the state in the presence of the members of the Medical and Chirurgical Faculty of Maryland, who devoted the last day of their meeting to attending the exercises.

Baltimore

Hospital to Be Improved.—The Hospital for the Women of Maryland has been closed preparatory to extensive improvements, including two new operating rooms in memory of Drs. William T. Howard and H. P. C. Wilson, founders of the institution.

Tuberculosis Dispensary Opened.—The new building of the Phipps Dispensary for Tubercular Patients, Johns Hopkins Hospital, was opened May 3. The building is of brick, three stories in height; the first floor will be used as a dispensary, and the second and third floors for research work. By this addition, the capacity of the dispensary is doubled.

New Building in Use.—A purely formal meeting of the Medical and Chirurgical Faculty of Maryland was held in the new building April 27, the time appointed in the by-laws. The meeting was then adjourned until May 13, for the dedication. The library was opened April 27, but will not be completely available for members until after May 17, when the new rules go into effect. The history of the library is discussed editorially in this issue.

Personal.—Dr. Hugh A. Stewart, assistant resident physician at Johns Hopkins Hospital, has been appointed adjunct professor of pathology in the College of Physicians and Surgeons, New York City.——Dr. Eugene F. Cordell delivered addresses before the District of Columbia branch of the Alumni Association of the University of Maryland at Washington, April 29, and before the Pennsylvania branch at York, May 1. ——Dr. Frank G. Moyer suffered a dislocation of his right shoulder in an automobile collision, May 4.——Dr. William Osler arrived from England May 5, and is the guest of Dr. Thomas McCrae.

MISSOURI

McCormack in Missouri.—Dr. J. N. McCormack started on a tour through the state at Maryville, May 3. He expects to visit about twenty-five cities, and will stay for three days in Jefferson City, at the time of the annual meeting of the state medical association.

Personal.—Dr. Charles E. Powell, Elsberry, has been appointed local surgeon for the Burlington System.——Dr. Charles Adkins has been appointed city physician of Kansas City.——Dr. Dennis E. Singleton, Shelbina, has been appointed assistant physician of the staff of State Hospital No. 4, Fulton.

St. Louis

McCormack in St. Louis.—Dr. J. N. McCormack will address the medical profession of St. Louis at the hall of the St. Louis Medical Society, 3524 Pine street, May 29, at 8:30 p. m.

Graduation.—The graduation exercises of the St. Louis College of Physicians and Surgeons were held May 7, when a class of 67 was graduated. The charge to the graduating class was given by C. Porter Johnson, and the diplomas were presented by Dr. Waldo Briggs.

Special Clinics.—The Medical Department of Washington University announces that for two weeks beginning May 24, special clinics and other exercises will be furnished free of charge to alumni and all other physicians who may desire to attend. Those who wish to attend clinics are requested to register at the Dean's office, 1806 Locust street. The announcement also contains a directory showing how to reach the various hospitals in the city, a time table and list of clinics and other exercises.

Unlicensed Practitioner Convicted.—James Austin Larson, who advertised in the daily papers that he was able to cure many diseases by what he called the "teleconi system," is said to have been convicted in the Court of Criminal Correction for practicing medicine without a license. The judge's instruction was "That holding one's self out and representing and professing to be able to heal diseases, no matter by what process, is practicing medicine within the meaning of the law." The defendant was fined $500, but as a compromise, was permitted to pay a fine of $150 on his promise to leave the state.

NEBRASKA

Society Election.—At the forty-first annual meeting of the Nebraska State Medical Association, held in Omaha, May 4-6, the following officers were appointed: President, Dr. P. Harold Salter, Norfolk; vice-presidents, Drs. William J. Birkofer, Gothenburg, and William H. Wilson, Lincoln; secretary, Dr. Alonzo D. Wilkinson, Lincoln; treasurer, Dr. Alexander S. Von Mansfelde, Ashland; delegates to the American Medical Association, Dr. L. Matt Shaw, Osceola, and alternate, Dr. Theodore P. Livingston, Plattsmouth; chairman of section on surgery, Dr. Arthur C. Stokes, Omaha; chairman of section on medicine, Dr. H. Winnett Orr, Lincoln; chairman of section on gynecology and obstetrics, Dr. Edwin C. Henry, Omaha; chairman of committee on public policy and legislation, Dr. Charles W. M. Poynter, Lincoln, and chairman of committee on medical defense, Dr. Alexander S. Von Mansfelde, Ashland. Drs. Ernest J. C. Sward, Lincoln, and Clifford P. Fall, Beatrice, were recommended for members of the State Board of Health.

NEW JERSEY

Personal.—Dr. R. O. Clock, Burlington, was seriously cut and bruised by being thrown from his carriage May 3.——Dr. Hafry F. Bushey, Camden, is said to be critically ill with cellulitis, said to be due to an abrasion of the chin.

April Deaths.—There were 3333 deaths reported to the bureau of vital statistics during the month ended April 15, an increase of 341 over the preceding month. Of the deaths 548 were individuals under 1 year of age, 324 of children between 1 and 5, and 1,052 of individuals 60 years old and over. Among the principal death causes were pneumonia, 427; tuberculosis, 415; nervous diseases, 395; circulatory diseases, 365; nephritis, 252; cancer, 145; diphtheria, 59; scarlet fever, 45; measles, 32; whooping cough, 30, and typhoid fever, 27.

Society Meetings.—At the annual meeting of the Hudson County Medical Society, held April 6, the following officers were elected: President, Dr. August A. Strasser, Arlington; vice-president, Dr. Henry J. Bogardus, Jersey City; secretary, Dr. Arthur P. Hasking; treasurer, Dr. Henry H. Brinkerhoff; reporter, Dr. Joseph Koppel; censor, Dr. John C. Parsons; permanent delegates to the state medical society, Drs. John J. Bowman, John J. Mooney, John J. Broderick, Henry H. Brinkerhoff, Jersey City, August A. Strasser, Arlington, and Henry Spence, Jersey City; annual delegates, Drs. T. Richard Paganelli, Hoboken, Henry H. Burnette, Hoboken, William W. Brooke, Bayonne, Berthold S. Pollack, William L. Pyle, S. Herbert Culver and William J. Arlitz, Jersey City, and alternates, Drs. Frederick A. Finn, Jersey City, Merrill A. Swiney, Bayonne, and George D. Fyfe, Jersey City.——Hunterdon County Medical Society, at its annual meeting, held in Flemington, April 27, elected the following officers: President and delegate to the state medical society, Dr. Enoch Blackwell, Clinton; vice-presidents, Drs. George Henry, Flemington, and Isidor Topkins, Califon; secretary, Dr. Obadiah H. Sproul, Flemington; treasurer, Dr. Isaac S. Cramer, Flemington, and censors, Drs. George L. Romine, Lambertville; George N. Best, Rosemont, and Willard E. Berkaw, Annandale, whose death is announced in this issue of THE JOURNAL.——Camden County Medical Society, at its annual meeting, held April 27, elected the following officers: President, Dr. William B. Jennings, Haddonfield; vice-president, Dr. Joseph S. Baer; secretary, Dr. Daniel Strock; assistant secretary, Dr. Alexander Ross; treasurer, Dr. A. Haines Lippincott; reporter, Dr. Henry H. Sherk; historian, Dr. Alfred Cramer, Jr.; censors, Drs. William A. Davis and William H. Pratt; permanent delegates to the state society, Drs. Henry H. Davis and Howard F. Palm, and annual delegates to the state society, Dr. Marcus K. Mines, all of Camden, and Drs. William A. Westcott, Berlin, and Charles H. Jennings, Merchantsville.——At the annual meeting of Middlesex County Medical Society, held in New Brunswick, April 21, the following officers were elected: President, Dr. John C. Albright, South Amboy; vice-president, Dr. Benjamin Gutmann, New Brunswick; secretary, Dr. Howard C. Voorhees, New Brunswick; treasurer, Dr. David C. English, New Brunswick; reporter, Dr. Arthur L. Smith, New Brunswick, and delegates to the state society, Dr. William E. Ramsey, John L. MacDowall, Perth Amboy, and Dr. A. Clark Hunt, Metuchen.

NEW YORK

Build City Hospital.—More than thirty physicians of Poughkeepsie have banded together and have agreed to raise the $30,000 necessary for the endowment of St. Barnabas Hospital in that city.

Personal.—Dr. Robert B. Lamb, superintendent of the Matteawan Hospital for the Criminal Insane, was attacked by a patient April 16, and rendered unconscious by a blow with a steel shovel. The patient afterward attempted suicide.——Dr. Louis A. Gould has been added to the medical staff of the Schenectady Day and Night Camp which was opened May 10. Drs. Charles C. Duryee, Louis P. Faust and William L. Pearson have been named as consulting staff to the camp.

State Has High Death Rate.—During the past year the death rate for the state of New York has been higher than the average for other states of the Union. Only California and Rhode Island had higher mortality. The average rate for the entire country was 16.1, while that for New York has been 17.1. The lowest rate in New York state was reported from the Adirondack regions and the highest from the manufacturing centers. The Hudson Valley has been slightly above the general average.

Tuberculosis Increasing in Rural Districts.—The bulletin of the State Department of Health shows that twenty-six cities in the state had a smaller death rate from tuberculosis in 1908 than in the previous year. Troy, Albany, Greater New York, and Cohoes showed the largest death rates from tuberculosis, and Johnstown, Hornell and Tonawanda, the smallest. Consumption is decreasing in the cities and increasing in the country districts. On the basis of the average for the five year period from 1901 to 1905, the death rate in the former dropped from 203.5 to 185 per 100,000 population, while in the latter there was an increase from 112.7 to 123 per 100,000. This is believed to be attributable to the fact that instruction and preventative measures now in force in cities as the result of the campaign the State Department of Health is carrying on in cooperation with the State Charities Aid Association, are lacking in the rural districts.

New York City

Alumni Meet.—The sixth annual meeting of the Alumni Society of St. John's Hospital, Brooklyn, was held May 2, when the following officers were elected: President, Dr. Alfred W. White; vice-presidents, Drs Charles B. Cortright and Edward W. Hodges; recording secretary, Dr. Warren S. Simmons, and corresponding secretary, Dr. Henry T. Hotchkiss.

New York Babies Healthy.—During the past two weeks the 141 nurses attached to the Bureau of Child Hygiene visited 3,000 babies and found only 19 ill. Not a case of ophthalmia was reported. Of this number 1,800 babies were nursed by their mothers. A committee has been appointed to ask the

Board of Education for the use of a public school building in each district during the summer for the purpose of holding public classes for the instruction of mothers.

Amendments to the Sanitary Code.—The Board of Health has added two amendments to the sanitary code: One demands that all cream sold in this city, sweet or sour, must contain not less than 15 per cent. butter fat. This amendment was made necessary because of the methods of adulteration used by some dealers in the poorer neighborhoods where foreigners use sour cream both as butter and as cheese. The second amendment insists that covers be kept on garbage pails.

NORTH DAKOTA

Personal.—Fire, which started in the office of Dr. Rolf H. Meidell, Aneta, entirely destroyed the building, with a total loss of $5,000, partially covered by insurance.——Dr. Charles S. Crane, Grand Forks, who spent the winter in California on account of ill health, returned and resumed practice April 28.

OHIO

State Society Election.—At the sixty-fourth annual meeting of the Ohio State Medical Association, held in Cincinnati, May 5-7, the following officers were elected: President, Dr. Walter H. Snyder, Toledo; vice-presidents, Drs. Harry R. Geyer, Zanesville; Albert S. Rudy, Lima; Charles A. Hough, Lebanon, and Thomas M. Sabin, Warren; councilors, Dr. Robert Carothers, Cincinnati, first district, and Dr. T. Clarke Miller, Massillon, sixth district; member of the national legislative committee, Dr. Benjamin R. McClellan, Xenia, and committee on public policy and legislation, Drs. John W. Clemmer, Columbus; George H. Matson, Columbus, and Walter H. Snyder, Toledo.

Personal.—Dr. Homer H. Heath, Toledo, was thrown from an automobile in a collision with a telephone pole May 1, and sustained severe contusions of the right shoulder.——Dr. James O. Starr, Pittsburg, who underwent operation at Columbus, April 27, for a tubercular abscess, is said to be doing well.——Dr. Simon P. Wise, Millersburg, has been elected chairman of the board of trustees of the State Sanatorium for Tuberculosis, Mount Vernon.——Dr. Jacob A. Stout, Columbus, was operated on for appendicitis, April 23, at St. Anthony's Hospital.

Cincinnati

Personal.—Dr. Clayton B. Conwell has been elected superintendent of the new State Sanatorium for Tuberculosis, Mount Vernon.——Dr. Frank E. Fee has left for a six months' tour of continental hospitals.

Faculty of Merged Colleges.—At the meeting of the board of trustees of the University of Cincinnati, May 4, President Dabney announced the following faculty for the Ohio-Miami Medical College, as the merged Medical College of Ohio and Miami Medical College will hereafter be known:

Department of Medicine—Drs. Henry W. Bettman, Mark A. Brown, Frederick Forchheimer, Oliver P. Holt, John E. Griewe, George A. Fackler, Benjamin F. Lyle, and Edwin W. Mitchell; Drs. Bettman, Brown, Forchheimer and Holt to have charge of the didactic teaching, Dr. Griewe charge of physical diagnosis, and Drs. Fackler, Lyle and Mitchell, charge of the clinical teaching.

Department of Surgery—Dr. Charles E. Caldwell, professor of the principles of surgery, and clinical professor of orthopedics; Dr. Robert Carothers, professor of the principles of surgery, and clinical professor of surgery; Dr. Nathaniel P. Dandridge, clinical professor of surgery; Dr. John C. Oliver, professor of surgery; Dr. Joseph L. Ransohoff, professor of surgery; Dr. Edward W. Walker, clinical professor of surgery, and Dr. Horace J. Whitacre professor of the principles of surgery.

Department of Therapeutics—Dr. Julius H. Eichberg, professor of pharmacology and materia medica, and Dr. Allyn C. Poole, professor of therapeutics.

Department of Pediatrics—Dr. B. Knox Rachford, professor of diseases of children.

Department of Obstetrics—Drs. William D. Porter, James Rowe, Magnus A. Tate, and E. Gustav Zinke, professors of obstetrics.

Department of Gynecology—Drs. Charles L. Bonifield, Charles A. L. Reed, Rufus B. Hall, and John M. Withrow, professors of gynecology.

Department of Ophthalmology—Drs. Stephen C. Ayres, Walter Forchheimer, Robert Sattler, Charles W. Tangeman, and Derrick T. Vail.

Department of Otology, Rhinology and Laryngology—Drs. Samuel E. Allen and John W. Murphy, clinical professors of laryngology and otology; Dr. Christian R. Holmes, professor of otology; Drs. Samuel Iglauer and Walter E. Murphy, adjunct professors of laryngology and otology; and Dr. John A. Thompson, professor of laryngology.

Department of Dermatology and Syphilology—Drs. Meyer L. Heidingsfeld and Edward H. Shields.

Department of Orthopedics—Dr. Albert H. Freiberg.

Department of Nervous and Mental Diseases—Drs. Brooks F. Peebe and F. W. Langdon, professors of psychiatry; Drs. Herman H. Hoppe and Philip Zenner, professors of neurology.

Department of Hygiene—Drs. Alexander G. Drury and John H. Landis.

The following professors will be salaried: Dr. William E. Lewis, professor of anatomy; Dr. Edmund M. Baehr, assistant professor of physiology, and Dr. Edward B. Reemelin, assistant professor of chemistry.

The following is an incomplete list of lecturers, demonstrators and assistants, selected by the professors of the various departments:

Department of Anatomy—Dr. Edwin M. Craig, lecturer on anatomy; Dr. Grear H. Baker, demonstrator of histology; Dr. Henry L. Woodward, demonstrator of embryology and clinical microscopy; Drs. Charles Maertz and Moses Salzer, demonstrators of anatomy.

Department of Therapeutics—Dr. Starr Ford, lecturer on dietetics and therapeutics, and Dr. Charles S. Rockhill, assistant.

Department of Diseases of Children—Drs. Alfred Friedlander, Franklin H. Lamb, and Albert J. Bell, adjunct clinical professors of pediatrics.

Department of Gynecology—Drs. John P. Miller, Joseph A. Hall, and Grear H. Baker, assistants and clinicians.

Department of Otology and Laryngology—Drs. Gustave A. Hinnen, Samuel Iglauer, and Walter E. Murphy, chief clinicians; Drs. William Mithofer, Robert H. Butler, and Albert E. Hussey, assistant clinicians.

Department of Ophthalmology—Dr. Wylie McL. Ayres, Victor Ray, and Frederick W. Lamb, clinical instructors, and Drs. John Rauly, Michael Behrman, and Frank B. Cross, assistant clinical instructors.

PENNSYLVANIA

Personal.—Dr. A. R. Atkinson has been re-elected health officer of Doylestown.——Dr. Aimé Lateve, head of the Magee Pathological Institute, Pittsburg, is reported to be in great danger on account of infection from hydrophobia.——Dr. Edgar Keeley, resident physician at Pottstown Hospital, has resigned.

Tuberculosis.—The Pennsylvania Society for the Prevention of Tuberculosis conducted a tuberculosis exhibition at Sellersville, May 4, and at Telford, May 8. In one year of active work the society has established a bureau of information, organized an employment exchange, conducted 649 formal talks and lectures, distributed 166,000 leaflets of instruction, secured the cooperative help of 159 organizations, opened two tuberculosis classes and one dispensary, gathered a tuberculosis exhibit which has been demonstrated in fourteen towns and cities and before 153,226 people, and established anti-tuberculosis societies in six cities and towns.

Bills Approved.—Governor Stuart signed the Salus cocain bill May 8. This bill provides that no person shall furnish, sell or give away cocain or allied drugs, except on prescription of an authorized practitioner of medicine. The maximum penalty for violation will be a fine of $500 and imprisonment for two years. The act, however, does not apply to regular traffic between dealers. The mere possession of cocain by any person other than a dealer is punishable by a maximum fine of $100 and imprisonment for six months, unless possession thereof is obtained through the medium of a prescription. Enforcement of the act rests with the State Pharmaceutical Examining Board, previous acts of this character being repealed. ——Governor Stuart has approved the Campbell pure drug bill. This is in line with the policy of the present administration, to enact laws fixing standards of food, drink and other articles taken internally. Recognized standards are fixed for drugs, and misbranding or adulteration is punishable by a fine of $50 for the first and $100 for each subsequent offense. District attorneys must institute proceedings on the State Pharmaceutical Examining Board reporting violations. The act will become operative October 1, and dealers may escape responsibility for stock on hand at that time by stamping each package with that date.

Philadelphia

Money for Department of Health.—At a meeting of Council's finance committee, April 6, $40,000 was appropriated to the work of the Department of Health and Charities.

Typhus Fever.—For the first time in seventeen years, typhus fever has been discovered in Philadelphia. Two cases were reported in Russian immigrants, and both patients were taken immediately to the Municipal Hospital and isolated.

Dispensary for Tuberculosis.—The new dispensary for tuberculosis, 1731 Orthodox street, Frankford, recently equipped by the state department of health, was formally opened April 28. It is known as Dispensary No. 107, will receive patients Mondays, Wednesdays and Fridays, from 2 to 4 p. m., and will be under the general supervision of Dr. Alfred Stengel and the immediate charge of Dr. W. G. Turnbull.

Personal.—Dr. Rush Baumann has resigned from the resident staff of Frankfort Hospital.——Dr. John G. Clark was honored by the senior class of the Medical Department of the University of Pennsylvania by having the class book dedicated

to him.——Dr. Randle C. Rosenberger was given a dinner May 1 by his friends and colleagues in honor of his election as professor of hygiene and bacteriology in Jefferson Medical College.

Jefferson Alumni Day.—Plans have been completed for the entertainment of the alumni of Jefferson Medical College at the next annual commencement. June 7, commencement day, has been set aside as alumni day and reunions of several classes will be held. At 3:30 p. m. Dr. William W. Keen will hold a public clinic in the Jefferson Hospital amphitheatre. At 7 p. m. the annual business meeting of the Alumni Association will be held at the Bellevue Stratford, to be followed by the annual banquet. The subscription ($5) to the banquet should be forwarded at once to Dr. Alfred Heineberg, 1327 Pine street, Philadelphia.

TENNESSEE

Personal.—At the May meeting of the State Board of Health, held in Nashville, Dr. Herbert Jones, Memphis, the president of the board, was appointed its delegate to the annual meeting of the Conference of State and Territorial Boards of Health with the United States Public Health and Marine-Hospital Service in Washington, D. C., June 2 and 3.——Dr. Nathaniel T. Dulaney, Jr., Bristol, has been appointed a member of the Lyon's View, Eastern Hospital for the Insane, near Knoxville.——Dr. George E. Pettey, Memphis, has closed his Denver and Atlantic City retreats and will hereafter confine his work to his Memphis institution.

Commencements.—On May 3, the Medical Department of Vanderbilt University, Nashville, held its thirty-fourth annual commencement, graduating a class of 49.——A class of 11 was graduated at the third annual commencement exercises of the College of Physicians and Surgeons, Memphis, May 1.——The Medical Department of the University of Tennessee, Nashville, graduated a class of 41, April 30.——The twenty-ninth annual commencement exercises of Memphis Hospital Medical College were held April 30, and the degree of doctor of medicine was conferred on a class of 98.—The fifty-eighth annual commencement of the Medical Department of the University of Nashville was held April 30, when a clas of 61 was graduated.

GENERAL NEWS AND COMMENT

Warning Concerning Agent.—Readers are warned concerning one P. W. Corzilius, alias J. W. Holman. No money should be paid to one who gives either of these names and pretends to represent THE JOURNAL (or, in fact, to any one unless he possesses an unexpired letter of authority for making collections). When last heard of, Mr. Corzilius was in Ohio. THE JOURNAL is very anxious to find him, and will appreciate prompt information toward this end. He is about 55 or 60 years of age, 5 feet 4 inches in height, 160 pounds in weight, with gray hair and florid complexion. He dresses rather shabbily and his general appearance indicates alcoholism.

Loving Cup Presented.—Dr. James Henry Honan, on the eve of his retirement from the presidency of the Anglo-American Medical Association of Berlin, after several terms of faithful service, was presented with a loving-cup on behalf of the association. Dr. W. S. McFarland, Kentucky, presented the cup, and on the motion of Dr. W. J. Sweasey Powers, San Francisco, Dr. Honan was elected honorary president of the association.

Railway Surgeons Meeting.—At the annual meeting of the Association of the Norfolk and Western Railway Surgeons, held in Cincinnati, May 4, Dr. Stephen S. Haldemann, Portsmouth, Ohio, was elected president, and Dr. Thomas M. Baird, Crewe, Va., secretary-treasurer. It was decided to hold the next annual meeting at Norfolk, Va.

Climatologists to Meet.—The twenty-sixth annual meeting of the American Climatological Association will be held at the Chamberlain, Fortress Monroe, Va., June 4 and 5, under the presidency of Dr. Charles E. Quimby, New York City. The association will consider and discuss papers on climatology, tuberculosis, pneumonia and heart disease.

Therapeutists Meet.—The tenth annual meeting of the American Therapeutic Society was held in New Haven, Conn., May 7-9, and the following officers were elected: President, Dr. James C. Wilson, Philadelphia; vice-presidents, Drs. Alexander D. Blackader, Montreal; Howard Van Rensselaer, Albany, N. Y., and Robert T. Morris, New York City; secretary, Dr. Noble P. Barnes, Washington, D. C., and treasurer, Dr. A. Ernest Gallant, New York City. At the annual banquet, Dr. Oliver T. Osborne, New Haven, presided as toastmaster, and President Arthur P. Hadley of Yale College was the guest of honor.

The Carroll Fund.—The following subscriptions have been received since the last report:

Previously acknowledged	$3668.65
Dr. A. Shimonek, St. Paul, Minn.	2.00
Dr. E. C. Ellett, Memphis, Tenn.	10.00
Dr. Abram T. Kerr, Ithaca, N. Y.	5.00
Dr. R. C. Coffey, Portland, Ore.	5.00
Anonymous, Saranac Lake, N. Y.	10.00
Dr. D. W. Goodman of Mobile, Ala., at Port Limon, Costa Rica	5.00
Dr. Charles Gardner Child, Jr., New York	5.00
Officers of the Medical Corps of the Army	115.00
	$ 157.00
	$3825.65

The sum of $3,600 is still needed to raise the mortgage on this property. All remittances and pledges should be sent to Major Ireland, as previously announced.

FOREIGN

The International Medical Congress

The second pamphlet issued by the committee of organization of the Sixteenth International Medical Congress, to be held at Budapest August 29 to Sept. 4, 1909, has been received. Besides other announcements, it contains the programs for the six general assemblies and for the twenty-one sections, also for a general meeting to discuss the reports and communications on appendicitis and immunity. The reports will be in the hands of the members a month before the date of the Congress. The subscription fee of $5 (25 korona) should be sent to the treasurer of the congress, Prof. J. Elischer, Esterhazyutcza 7, Budapest VIII, Hungary. In order to ensure accommodations, members are urged to engage lodgings in advance; the arrangements for accommodations and for numerous well planned excursions are in the hands of the Central-Traveling-Ticket Office, IV, Vigado-ter I, Budapest, Hungary, which has arranged the lodgings on the hotel-coupon system, the amount to be paid at the time of the order; this amount, less $2.50, will be refunded if coupons are returned before August 20. Further details and circulars will be mailed by the officials to those interested on request.

The addresses at the six general assemblies are to be: "The Veins Open to Heroic Medicines," by G. Baccelli, of Rome; "Cancer," Bashford, of London; "Heredity, Survival of the Fittest and Hygiene," by M Gruber, of Munich; "System of Postgraduate Instruction," by R. Kutner, of Berlin; "Exotic Pathology," by A. Laveran, of Paris, and "Artificial Parthenogenesis," by J. Loeb, of Berkeley, Cal. E. Holländer, of Berlin, will also deliver an address on "Representations of Disease in the Pre-Columbian Epoch." Among the addresses in the section on internal medicine are those by Osborne, of New Haven, on "Disturbances of the Internal Secretions, Clinically Considered;" Brauer, of Marburg, on "Adherent Pericarditis;" Ebstein, on "Leukemias;" Inman, of London, on "Immunity in its Relation to Practical Medicine;" Kraus, of Berlin, on "Serodiagnosis;" Lenhartz, on "Appendicitis from Standpoint of the Internist;" Huchard, of Paris, on "Arteriosclerosis of the Heart," and Ketly and Müller, of Budapest, on "Arteriosclerosis in the Abdomen, Etc.;" von Noorden, of Vienna, on "Obesity;" Pel, of Amsterdam, on "Tuberculin Treatment of Tuberculosis," and Maragliano, of Genoa, on "Serotherapy of Same;" Henschen of Stockholm, on "Accidental Anemic Murmurs;" Senator, of Berlin, on "Polycythemia," and Romberg, of Tübingen, on "Rôle of the Vessels in Internal Diseases Outside of Actual Vascular Affections." The twenty-two reports in the section on surgery include those by Harvey Cushing, of Baltimore, on "Cerebral Injuries;" McArthur, of Chicago, on "Opsonins," and Gerster, of New York, on "Progressive Peritonitis." In the section on obstetrics and gynecology Wertheim, of Vienna, will report on the "Ultimate Results of Abdominal Operations for Uterine Cancer," and Schauta, of Vienna, on the same by the vaginal route. The section on otology represents the Eighth International Congress of Otology, and has a long and varied list of reports, including those by Dench, of New York, on "Treatment of Acute Otitic Meningitis," and by Reik, of Baltimore, on "Mastoidectomy."

The Lenval prize for the best work on the physiology, pathology or anatomy of the organs of hearing published during the last four years is to be awarded at the closing session of the Congress.

The International Association of the Medical Press convenes just before the Congress, and a meeting will also be held open to all connected with the medical press, at which the aims and scope of the association will be described by de Jace, and the

advisability of concluding summaries for all medical articles will be presented by Blondel, of Paris. Over forty-five pages of the pamphlet are filled with the titles of the reports, addresses and communications already enrolled. A subsection for orthopedics has been arranged, as also for professional and school hygiene in the section on hygiene.

Most of the European railways allow a reduction of 50 per cent., under certain restrictions, to the congress members. The list of members of the American committee was given in THE JOURNAL, June 13, 1908, page 2008, with various particulars in regard to the congress. Dr. J. H. Musser, 1927 Chestnut street, Philadelphia, is chairman of the American committee for the congress, and will send, on request, the circulars, etc., already issued.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 1, 1909.

Action by a Physician Against a Hospital for Injury During an Operation

An extraordinary action has been brought against the governors of St. Bartholomew's Hospital. A physician who had returned from West Africa suffered from attacks of sciatica and was admitted March 28, 1907, in order that he might be examined under anesthesia. He alleged that he was placed on an operating table in such a position that his arms were allowed to hang over its sides, that his left arm was in contact with a hot-water bottle projecting from beneath the table, that the inner part of his right arm was bruised by the operator or some other person pressing against it during the operation, and that the result of these injuries was traumatic neuritis and paralysis of both arms which had since prevented him from following his profession. The examination was undertaken gratuitously, as he had come to the end of his resources. The defendants denied the alleged negligence and pleaded that if they owed any duty to the plaintiff it was to exercise reasonable care in the selection of the hospital staff, in which they had not failed. Dr. Risien Russell, who saw the patient soon after the examination, was called. He found him suffering from paralysis of the left arm and partial paralysis of the right arm, which was due to neuritis. He never knew of a case in which a burn caused by a hot water bottle resulted in paralysis. The plaintiff gave evidence that the day after the operation the warden and the house surgeon of the hospital told him that his arm had not been supported while he was under the anesthetic. They could not account for the burn on the arm unless it had come in contact with the hot water bottle or some hot apparatus. He admitted that when the sciatica became acute he began to inject morphin and that he took a certain amount of alcohol when in West Africa. Mr. Justice Grantham, in giving judgment, refused to allow the case to go to the jury as it was involved in doubt as to the facts; he therefore dismissed the case.

Objections to the X-Ray Treatment of Ringworm of the Scalp

The proposal of the London County Council to follow the example of Paris and provide *x*-ray treatment for ringworm of the scalp of school children has aroused discussion on the dangers of the method in the lay press. In accordance with the well-known selective action of the rays on rapidly growing tissues, Dr. Dawson Turner, an old worker with the rays, suggested in the *Times* that the treatment might injuriously affect the delicate cells of the growing brain of a child. The antivaccinationist, antivivisectionist, and in general antimedical *Star* took up the cry and in an editorial entitled, "The War Against Children," described the suggestion to apply the *x*-rays to the delicate cells of the child's brain without the parent's consent as criminal. A representative of the *Times* discussed the subject with a number of well-known electrotherapeutic experts and all expressed the view that however harmful the *x*-rays might be if unskilfully managed, there is no reason to think that any injurious effects would follow their use in the treatment of ringworm, provided this is controlled by a skilled operator. The exposure is of short duration and the apparatus has been so perfected, in the light of the terrible experience of the pioneers in its use, that there is no reason to suppose that properly used the rays would do more than eradicate the ringworm. Dr. E. S. Worrall, chief of the electrotherapeutic department of University College Hospital gives three applications of short duration in one week and after three weeks the patient is absolutely bald and cured. After three months the hair begins to grow again vigorously. He has never known of any case of injury from this treatment or even from the treatment of lupus, in which ten or twenty times the exposure is necessary. Dr. C. R. C. Lyster, chief of the electrotherapeutic department of the Middlesex Hospital has treated over 600 cases with similar results, but he takes extraordinary precautions against risks.

Ambassador Tries to Evade Paying His Physician

It has seldom happened that a doctor has had to sue an ambassador for the payment for his services. In the Marylebone county court, Dr. A. S. Currie sued Gen. E. M. Teran for 853. When the claim was filed the defense was set up of immunity from process on the ground that the general was envoy and minister plenipotentiary to this country from the republic of Ecuador. But when the case came into court he had received letters of recall; a letter was read from the foreign office stating that after his recall he could not claim immunity from process on account of his diplomatic position. The claim was for attendance on the general's children in 1907. The physician tried to get his fees then, but the plea of immunity was set up. He therefore decided to wait for the expiry of that position. The judge gave judgment in favor of the physician with costs.

Zinc Poisoning

An unusual form of poisoning—by zinc—is reported from Newport, Wales. An inquest was held on a girl, aged 13, who became unconscious and died soon after a supper of chipped potatoes purchased at a shop in the town. Traces of zinc were found in the contents of her stomach and the metal was also found in the oil used for cooking the potatoes and in the potatoes themselves. The cooking pans were coated with an alloy of zinc. It was thought that the action of the oil, combined with the process of cleaning the pans, had enabled the zinc to become incorporated with the potatoes.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 29, 1909.

The General Association of French Physicians

The General Provident Benefit Association of Physicians of France on April 25 celebrated in the sessions hall of the Academy of Medicine the fiftieth anniversary of its foundation. The opening session was presided over by M. Viviani, minister of labor, assisted by a representative of the ministry of public instruction and by Dr. Lereboullet, member of the Academy of Medicine, and president of the association. All the provincial societies affiliated to this association sent delegates. Addresses were read by Dr. Lereboullet, who briefly related the history of the association, and detailed the different stages through which it has passed; by Dr. Lepage, agrégé at the Faculty of Paris, and general secretary of the association, who explained the moral and financial status of the work; and by Professor Livon, director of the Marseilles school of medicine, in the name of the local societies.

The association has a double aim. It assures life pensions to aged or invalid members and assists the widows and orphans of those deceased. On the other hand, it defends the professional interests of physicians whenever they are menaced or at stake. It numbers at present nearly 10,000 members, belonging to 94 local societies. It is, as a matter of fact, a federation of societies. All the local societies are autonomous and control their own membership and funds and the discussion of all questions that interest them, as well as take note of the abuses of which physicians are often victims.

In regard to this autonomy of the local societies, the general council of the association never refuses to take notice of the resolutions transmitted to it by the local societies, but it places the onus of deciding the points under consideration on the general assemblies, which take place once a year, and in which only the members of the general council and the presidents and delegates of the local societies can take part. A vigilant guardian of the statutes of the association, the general council contents itself with replying to the points submitted to it, taking care, in the words of the statutes themselves, "always to maintain the practice of the art of medicine in the paths of utility to the public good and conformable to the dignity of the profession."

The association receives important gifts and legacies. The bequest made recently by Dr. Gille of Garches, amounted to more than 400,000 francs. The entire fortune of the association, including the property of the 94 local societies, is, at the

present time, some 5,468,557 francs. This figure indicates the wisdom with which the association has been administered. It has, it is true, been sometimes accused of too strict economy, and of not relieving effectively enough the distress of the profession. But it must not be forgotten that, in its capacity as a mutual benefit society, the association can intervene in favor only of its members, their antecedent kin, widows and orphans. Restrained by its statutes it can not come to the assistance of *confrères* who have no part in it.

On the other hand, in order not to overstep the revenues of the life pension fund, the general council has fixed, as conditions of eligibility for the pension of 1,000 francs, an attained age of 70 years and a minimum membership of 35 years. But as soon as the resources of the benefit fund shall become sufficient, that is to say, in the not distant future, the council proposes to make all the pensions uniformly 1,000 francs.

School Sanitary Records

The French League for School Hygiene, of which I have had occasion to speak in a previous letter (THE JOURNAL, Sept. 26, 1908, page 1094) has taken a very active part in the establishment of individual school sanitary records, the purpose of which is to safeguard the health of the child throughout the entire school period. But a certain number of physicians are disturbed by this institution, fearing lest the school physician, being called on to place on the record the results of the periodical examinations that he makes, may in some way prejudice the ordinary physician of children.

For this reason, and to avoid all misunderstanding, the league has just formulated the aim and scope of the school record. The league reminds us that the school physician is to put on the record only the findings of his own examination, enabling him to determine that the general health of the child (weight, height) is or is not satisfactory; that certain symptoms or apparatus (lymphatic, teeth) are or are not normal; that certain organs (eye, ear) are functioning well or ill. Thanks to these regulations, the school physician will be able, without defining either the nature or the cause, to inform the parents that the growth of the child is not good, that its general health is poor, that the functioning of certain organs is defective. At the same time he will point out the necessity of having the child examined by the family physician, who alone can establish the diagnosis and institute the treatment. Thus the parents will be given the opportunity to submit the child to examination by their physician and entrust it to his care, which they would in all likelihood not have done, or would have done too late, if they had not been warned in time by the school physician.

The school physician has no further control to exercise, either in regard to diagnosis or treatment of the physician in charge of the case, whom he should ignore. The only justification of his warning to the parents will be to renew them at his later periodical examinations, if he finds the same conditions as on the preceding occasion.

Under these circumstances there is no reason for disquietude in the intervention of the school physician and in the institution of the individual sanitary record, either as to violation of the professional secret—since there will not be any diagnosis made or written, and the physician alone will have charge of the records established by him—or as to any antagonism between the school physician and the physician in charge; the rôle of the first being limited to pointing out to the parents the necessity of submitting the child to the physician and placing it under his care.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 21, 1909.

First Aid Service

The Berlin first aid service was established about ten years ago, and so far has been somewhat defective. The earliest arrangements for this purpose were made by the trade unions (*Berufsgenossenschaften*) in connection with the accident stations established by them in which injured persons were received, for which the *Berufsgenossenschaften* were responsible. As by means of these arrangements the material derived from these injuries was withdrawn from the Berlin hospitals and clinics, the Berlin physicians, under the leadership of Professor von Bergmann, organized a first aid association, of which every Berlin physician might be a member. A large number of Berlin hospitals became first aid stations in which injured persons were received. In addition to these two organizations, there exists still another of long standing, the so-called "sanitary watch" (*Sanitäts-Wachen*), which is open only part of the day and part of the time only provided with an assistant, and in fact simply serves to furnish temporary aid in injuries and sudden accidents. From the similarity of the work of these three institutions there arose all sorts of difficulties from competition, especially between the Berlin first aid association, which provides a general medical institution, and the accident stations which endeavored to monopolize the first aid service. The repeated efforts to convert the entire first aid service into a city institution were not successful. An improvement was made three years ago when a central station of the Berlin first aid association was established in the city hall, at which there could be learned at any time the number of available beds in the various hospitals and ambulances could be ordered, and at the same time the city council was requested to enter into negotiations for a further transfer of the arrangements for first aid to the authority of the city. A year afterward six first aid stations were taken over by the municipality, but a municipalization of the first aid service has not yet been secured. On the other hand, the hospitals have been taken under municipal supervision and are chiefly supported by the city. The accident stations are no longer to treat permanently as formerly the patients who are injured in the trades, but only to furnish first aid as is done by the first aid stations conducted by the first aid association. At every accident station there shall no longer be as formerly a service by a few physicians, appointed by the trades union, but at least ten physicians shall be stationed at each station who shall be selected by the association of physicians for the Berlin first aid service and shall be under the oversight of the executive committee of the medical society. In this way as many physicians as possible may participate in the first aid service and there will be a change of physicians in attendance every two hours during the day. The fee for the day service will be 1 mark an hour (25 cents) and 8 marks for the entire night ($2.00). The city assists the first aid service with 60,000 marks ($14,400), the accident stations with 75,000 marks ($18,000) and the *Sanitäts-Wachen* with 36,000 marks ($8,640). Thus at least a sufficient groundwork is made for the first aid service of the city and it may be hoped that on this basis further improvement will gradually be made.

Instruction in Hygiene in the Army

The soldiers are instructed from their entrance into service regarding the care of the body. The under officers are instructed once or twice a week by the use of a small pamphlet on hygiene for soldiers, regarding the care of the feet, cleansing the hands, care of the teeth, and these officers give lessons to recruits. A copy of the book on hygiene is placed in every barrack so that the soldiers may inform themselves in their leisure hours. The privates are especially instructed in the care of the teeth by an assistant surgeon and it is required that each man shall have a suitable tooth brush. By order of the physician of the general staff each physician who makes sanitary inspection of soldiers at certain intervals shall use this opportunity to discuss matters of hygiene with the men in a manner generally intelligible, especially regarding the character and prevention of sunstroke, regarding the dangers of excessive use of alcohol, the prevention of venereal diseases and the like. In a similar way the officers are occasionally instructed by sanitary officials.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 28, 1909.

The International Medical Congress at Budapest

Great interest is shown in the proceedings of the medical congress, to be held at Budapest August 29 to September 9, and great anxiety has been felt in Hungarian and Austrian medical circles about its success, for it was endangered by the threatening war. Happily this has been warded off. In Austria-Hungary, especially in Hungary, medical science is mostly in young hands, and these men are anxious to show their progress. The number of communications to the congress is already large and will no doubt increase vastly before the convention meets. As all the proceedings of the congresses appear regularly, though much belated, in our medical journals, there will be much work for the journal committee. At least 500 members are expected, not counting those from America and Africa. [See also page 1591.—ED.]

The New Regulations Concerning Disinfection

About one year ago, new rules as regards disinfection after contagious diseases were put in force and at a meeting of the board of health, the report of the directors of the disinfection

department was read. There are two chemicals used in all disinfection, by public health authorities, for inhabited places: sprayed or, preferably, vaporized formaldehyd; if this is not possible or not effective oxyeyanid of mercury is used. This is transported in a 5 per cent. solution by the disinfecting staff, who have to dilute the liquid until it is 0.25 to 0.5 per cent. strong, according to the object to be disinfected. The public lately prefers the second method because of its cheapness and absence of odor. The parties, however, who are willing to pay for the expense, may have their rooms and clothing disinfected either by carbolic, steam or formalin. There are five large steam disinfectors in the possession of the board of health, each capable of holding 25 cubic meters (about 7,000 cubic feet), and a sixth one is being constructed. A special series of regulations deals with prophylaxis against special diseases by the members of the disinfecting staff themselves, for instance, after the conclusion of his work each man must change his clothes for sterile ones, while the garments he has worn are disinfected. In the ten months ended March, 1909, 16,000 rooms in 5,000 houses and 112,000 articles belonging to 12,620 persons were disinfected, and all this work is done gratis, as the rate-payers have to find the sums necessary for the board of health. The expenditure was a little over 50,000 crowns ($10,000).

Defects of the Public Nursing System

An unhappy incident in one of our largest institutions for the care of the insane has thrown light on a grave defect in the otherwise really enlightened and satisfactory administration of this asylum. A patient, who was somewhat troublesome during the night, was so treated by three male attendants who were trying to quiet him, that he died soon afterward. A postmortem inquest showed that death was due to fracture of the thyroid cartilage, and it appeared that the attendants had tried to overcome the maniacal patient by wrapping him in a wet sheet, contrary to the rules of the asylum. This they succeeded in doing only after a severe struggle. The lack of good nurses and attendants has been admitted by all hospitals. In fact, there are very few well-trained nurses of better classes at present available. The public here does not yet realize the necessity of fully competent persons for the care of the sick. As a rule, the social standing and the pay of nurses are very low here; and strenuous efforts are being made by private hospitals to educate and train proper nurses for their own benefit. In public hospitals things are worse, except where the members of a religious sisterhood are employed. It is now planned to induce sisters to take over the charge of wards in public hospitals to the exclusion of lay nurses. Male attendants in asylums are still less satisfactory than the lay female nurses, for the pay is so very low that any able-bodied man may earn twice as much by any work with much less toil and responsibility. The sad incident mentioned above has excited much public comment and condemns the present system of misplaced economy. Already a list of requirements has been published for male attendants in public hospitals which will enable the directors to employ none but reliable persons—if the necessary funds are provided.

Association News

THE ATLANTIC CITY SESSION

Program of Entertainments—Prospect of a Large and Successful Meeting

Word is received from Atlantic City that details are being perfected in a satisfactory manner for the Sixtieth Annual Session of the American Medical Association, to be held June 8 to 11. We print below a list of the entertainments arranged for the visitors on this occasion. This complete list was not ready in time to be included in the Atlantic City Number of THE JOURNAL, May 1.

We call attention to this Atlantic City Number. It contained many pages of details concerning the session. The programs of papers to be read in the scientific sections were given, showing the elaborate and comprehensive series of discussions which await those who will attend.

A large list of hotels was given with rates, and all were urged to secure their accommodations in advance, in order to save trouble on arrival at Atlantic City. There can never be a suggestion of inadequate hotel accommodation in this city of hotels, but it sometimes happens that the preferred space in some particular hotel—perhaps the one most desired—is entirely filled.

A slight error occurred in the May 1 issue, in that the Hotel Ponce De Leon was located on Maryland avenue instead of Virginia avenue, and the Imperial Hotel on Virginia instead of Maryland.

Railroad tickets will be validated on Young's Old Pier, near the Commercial and Scientific Exhibits, as in previous years.

We are asked to call attention to the Informal Tea for the ladies, mentioned in the following program of entertainments. This is a new feature which deserves attention, as a special endeavor will be made to have it a most notable occasion. This function will take place at the Hotel Chalfonte, Tuesday, June 8, 4 to 5 p. m., and all ladies who attend the session are most cordially invited to be present at this, as well as at the other events arranged especially for them during the week.

PROGRAM OF ENTERTAINMENTS

(The official members' badge, or one of those provided for ladies and guests, will be required for admission.)

Tuesday, June 8

AT THE CHALFONTE HOTEL

4 to 5:30 p. m.—An informal tea will be given to the visiting ladies of the American Medical Association by the ladies' committee of Atlantic City.

AT HOTEL ROYAL PALACE

9 p. m.—Alumni reunion and smoker, Jefferson Medical College.

AT HOTEL ISLESWORTH

9 p. m.—Alumni reunion and smoker, Medico-Chirurgical College (Philadelphia).

The following medical colleges will hold alumni reunions: Dartmouth, Rush, University of Vermont, Long Island. A full list will be announced later.

Wednesday, June 9

ON THE BEACH OPPOSITE TENNESSEE AVENUE

12 noon—For visiting ladies: Exhibition of rescue by the Atlantic City Life Guards, directed by Beach Surgeon Dr. J. T. Beckwith.

FROM VENTNOR BOAT CLUB HOUSE

2:30 to 5:30 p. m.—Sailing parties for ladies will leave Ventnor Boat Club House at short intervals.

AT MUSIC HALL, STEEL PIER

8:30 to 10 p. m.—Reception to the President, Dr. William C. Gorgas.

AT MUSIC HALL, STEEL PIER

10 to 12 p. m.—Dancing.

Thursday, June 10

AT YOUNG'S MILLION-DOLLAR PIER

11:30 a. m.—Public exhibition-hauling of seine (courtesy of Mr. John L. Young).

AT THE PLAZA, MARLBOROUGH-BLENHEIM

4 to 6 p. m.—Ladies' reception.

AT MARINE HALL, STEEL PIER

8:30 to 10:30 p. m.—Musical cycle.

AT MUSIC HALL

8:30 to 10:30 p. m.—Musicale (Metropolitan Orchestra, with soloists).

AT ISLESWORTH CAFÉ, VIRGINIA AVE. AND BOARDWALK

10:30 to 12 p. m.—Vaudeville and smoker.

AT NEW BERKLEY CAFÉ, KENTUCKY AVE. AND BOARDWALK

10:30 to 12 p. m.—Vaudeville and smoker.

[Vaudeville and Smokers for gentlemen and ladies.]

The Country Club House at Northfield will be open to the physicians and ladies during the entire meeting.

The Atlantic City Yacht Club extends the courtesy of its club house during the meeting.

Pharmacology

HOWELL'S MERCOL AGAIN

Another Analysis Fails to Reveal the Presence of Mercury

During the latter part of last year a physician of Hot Springs, Ark., wrote asking for information regarding a preparation known as Howell's Mercol, manufactured by H. B. Howell & Co., Ltd., New Orleans. The preparation was, and is, advertised as a 1 per cent. solution of mercuric iodid in a non-irritating neutral menstruum, recommended for hypodermic use in the treatment of syphilis. The physician above referred to expressed some doubt as to the amount of mercury the product contained, for while he admitted that it was non-irritating, he claimed to have been unable to get either the physiologic action or therapeutic results of that drug. The matter was therefore taken up and at the request of the secretary of the Council on Pharmacy and Chemistry, Drs. Reid Hunt and Atherton Seidell of the Hygienic Laboratory of the Public Health and Marine-Hospital Service undertook its examination. The result of this examination was published in THE JOURNAL, Jan. 16, 1909, page 225. As will be remembered the analysis showed that Mercol contained no mercury, or if any at all, but the merest trace. The examination, which was exceptionally exhaustive, should have revealed the presence of mercury had it been present.

After the publication of the results of this investigation on Mercol, Dr. J. M. Magruder of New Orleans wrote to THE JOURNAL protesting for Howell & Co., "that the firm has no desire to foist on the medical profession or the public a fraud." Dr. Magruder, who says he is family physician to the head of the firm, described his visit to Howell & Co.'s place of business, where he witnessed the manufacture of Mercol, weighing out the ingredients and watching the process until the finished product was bottled. With his letter to us he sent a sample of this particular batch of the product which at once was forwarded to Drs. Hunt and Seidell of the Hygienic Laboratory, with the request that they examine it. This they did and the results were the same as before; that is, mercury was not present or if so, only in an infinitesimal amount.

What do these results mean? Here we have a firm claiming that its product contains 1 per cent. of mercuric iodid and we also have a physician, whose honesty is unquestioned, asserting that he had seen this amount of mercury salt used in making the product. Yet chemical analysis demonstrates that mercuric iodid is, to all intents and purposes, absent. Evidently in subjecting the various ingredients to the "process"—the nature of which is not disclosed—necessary for the production of the finished article, instead of achieving the feat of dissolving the mercuric iodid in the non-irritating neutral menstruum, the "process" eliminates this drug altogether. Knowing nothing about the "process," it is idle even to try to guess what may have occurred to dissipate the essential, and it is claimed the only potent drug in the preparation. Hypotheses in such a case are valueless; the important fact, and the one that vitally concerns both patient and physician is that the finished product fails to contain the ingredient on which the value of the product depends. To a syphilitic relying on the well-known remedial effects of mercury supposed to be present, this fact has more than an academic interest.

It is not sufficient for a manufacturer to claim honesty and good faith. In the making of remedial agents sins of omission may be as potent for harm as sins of commission; ignorance or incapacity may be as deadly as dishonesty or fraud. It is the duty, as well as the business, of a drug manufacturer to base his claims on his finished products, rather than on the component parts used in their manufacture.

That the firm is satisfied with Dr. Magruder's proof of its own honesty is evident, for we find his letter to THE JOURNAL reproduced in the "Publisher's Notes" department of the *New Orleans Medical and Surgical Journal*, April 1909. This, too, in spite of the fact that we wrote Dr. Magruder, Feb. 6, 1909, informing him of the negative results of the analysis of the sample made under his observation. If Messrs. Howell & Co. have made an honest mistake in supposing they could produce a 1 per cent. solution of mercuric iodid in liquid petrolatum, they will see that the mistake is corrected; if, on the other hand, they are governed by commercial considerations only, they will doubtless continue to perpetuate the same misrepresentation.

BRUSH'S REMEDY FOR SEASICKNESS

W. A. Puckner and W. S. Hilpert

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

As a number of inquiries have been received regarding a much advertised "Brush's Remedy for Seasickness," the preparation was subjected to analysis in the Association's laboratory. The report follows:

"Brush's Remedy for Seasickness" is sold in five-ounce bottles in which are blown the name and the use of the preparation. Besides giving the name and use of the preparation, the label contains the following statement:

"It is confidently claimed that this preparation will prevent seasickness and carsickness if used strictly in accordance with the following directions:

"A dessertspoonful in a wineglass of water every three hours commencing at least 24 hours before sailing and repeating the dose occasionally during the voyage.

"The Brush Chemical Co., New York, N. Y."

A small vivid red pamphlet that goes with the bottle more fully elaborates on the claimed virtues of the "remedy." The following are specimen statements taken at random from the pamphlet:

"The only known specific that will invariably prevent *mal de mer*."

"Seasickness positively prevented."

" . . . is totally harmless and has not the slightest unpleasant effect on the heart or circulation."

In addition to other equally broad statements and comments, several testimonials are given to convince the skeptical.

The "remedy" is a light yellow liquid, without odor, but with a decidedly acid taste. Qualitative tests demonstrated the presence of citric acid and sodium bromid, but the presence of other acids, metallic radicles or any alkaloids could not be demonstrated. Quantitative determinations[1] showed the presence of 14.94 gm. sodium bromid and 2.71 gm. citric acid per 100 c.c. of the preparation. A small quantity of an organic coloring matter was also found.

From the results of the chemical analysis of "Brush's Remedy for Seasickness," it is concluded that it is essentially a solution of citric acid and sodium bromid, and hence has the value only of these ingredients.

Medical Advertisements in the Lay Press

An article entitled "Protecting the Magazine Reader from Advertising Frauds," appeared recently in *Printer's Ink*, in which the struggle for a "clean-up" in advertising is recounted. Reference is made to a rule early established by the Curtis Publishing Company—whose sole publication at that time was the *Ladies' Home Journal*—that "no advertisements of a medical or curative nature" would be accepted. Justification of this rule is given on the following grounds: "It is possible that under this ruling a few—a very few—worthy remedies are excluded, but it would be practically impossible for a publisher to discriminate, with absolute justice, in this class of advertising; nor is it possible to recommend any remedy, however good, without reserve, to an army of millions of readers."

The last-mentioned objection to medical advertising applies without question to every "patent medicine" that has ever been foisted on a self-drugging public.

1. (a) The presence of citric acid and the absence of other acids having been demonstrated, the amount of citric acid was determined by titration with standard alkali 10 c.c. of the remedy required for neutralization an average of 39.16 c.c. tenth-normal alkali which is equivalent to 0.2488 gm. citric acid or 2.71 gm. per 100 c.c.

(b) The bromin was determined as silver bromid in the usual way. In this manner 10 c.c. of the remedy diluted to 100 c.c. and 10 c.c. portions used, yielded (a) 0.2724 gm. silver bromid, (b) 0.2725 gm. silver bromid averaging 0.2725 gm. which is equivalent to 1.494 gm. sodium bromid per 10 c.c. of the remedy, or 14.94 gm. per 100 c.c.

As a check, sodium determinations were made and the sodium sulphate obtained calculated to sodium bromid. It was found that in one case 10 c.c. of the preparation yielded 0.9900 gm. sodium sulphate and in another case 0.9904 gm., giving an average of 0.9902 gm. This was equivalent to 1.455 gm. sodium bromid or 14.55 gm. per 100 c.c. which agreed sufficiently with the sodium bromid calculated from the bromin determination to demonstrate that the sodium and bromin are present in molecular quantities.

Correspondence

A Disclaimer from the Mayo Brothers

To the Editor:—We have been advised not to pay any attention to the publicity given us by an article appearing in a recent issue of *Human Life.*

Inasmuch as we have on several occasions suffered public humiliation of this character, it does not seem unreasonable that we should state our position exactly, because, while we have the assurance that our friends and acquaintances fully understand our attitude as professional men toward the public, it is of course impossible that we should know personally all the practitioners of medicine in this country, and we desire the respect and esteem of all. Our endeavor is, has been, and will continue to be, in strict accord with both the letter and the spirit of the ethics of the medical profession.

In 1905 one of us was elected president of the American Medical Association, and as this was a great honor to come to a young man living in a small town, who was practically unknown outside of the medical profession, it attracted considerable attention among the laity. About this time there appeared in *McClure's Magazine* an article written by Samuel Hopkins Adams, descriptive of a number of men in the profession, ourselves among them. Mr. Adams wrote his review with true journalistic instinct and characteristic vigor. It was not so much what he said as the striking manner of saying it that called public attention to us, and since that time we have, on several occasions, been subjected to the annoyance of having our private affairs made into "news." Before then we had never been "written up," our names had never been brought prominently before the public, and we were known only through our professional work.

Shortly after the article appeared in *McClure's*, various persons came to Rochester to obtain sensational data for publication. These people talked with hack drivers, barbers, the people on the street, and took "snap shots." One of them secured old photographs, which are printed in the article in *Human Life.* With the greatest possible effort we succeeded in heading off the publication of a number of these articles.

In 1907 an article concerning us was published extensively in the Sunday supplement of a group of newspapers. We promptly wrote a letter to THE JOURNAL of the American Medical Association disclaiming all knowledge of it and stating that we would take legal steps for redress. *Human Life* republishes substantially the same article.

The article is filled with exaggerations and untruths, and is written in a style most offensive to any one accustomed, as we have been, to regard professional ethics carefully. It seems incredible that any fair-minded man in the medical profession could read this article and believe that we had anything to do with its production. The author states that W. W. Mayo, who is a man 90 years of age, and twenty years retired from practice, gained his diploma in the "school of experience," intimating that he was not in regular standing in the profession. As a matter of fact, W. W. Mayo graduated from the Missouri Medical College in 1854.

A large number of men in the profession received marked sample copies of this particular number of *Human Life,* and within a few days a letter calling attention to the article and soliciting subscription. Strange as it may appear, some of these men have taken the matter seriously, disregarding the facts that we have always been honorable practitioners, have had an established practice for years, and have received many honors from the medical profession, and that any such action on our part could add nothing but injury to our professional standing, and a disagreeable notoriety. We consider any such supposition in regard to our integrity not only as an insult, but as an affront to our intelligence. One can appreciate how such action might be believed of one man, but it is incomprehensible how any one could suppose that two men over 40 years of age, and one at the age of 90, would deliberately take measures to discredit the work of a lifetime.

It really seems as though the facts in the case might constitute a basis of legal action for libel. We had the matter up two years ago with our attorneys regarding the first appearance of this article. They informed us then that it was not legally a libel for the reason that newspapers had a right to comment on men, their business and their actions, and the courts held that if no injury or discredit was intended, the offense was not actionable. As one of the attorneys said: "Do you suppose for a moment that the wizards of oil and finance would allow themselves to be commented on by the press in the way they are if they could prevent it? If they with all their money and influence can not stop it, how can you expect to do so?" However, this last offense seemed on the face of it, to us and to many others, to constitute a libel, but we, find, unfortunately, that the courts have ruled otherwise.

We herewith submit an opinion from our attorneys.

WILLIAM J. MAYO,
CHARLES H. MAYO.

DRS. W. J. AND C. H. MAYO, Rochester, Minn.

Dear Sirs —We have carefully read the article published in the April, 1909, issue of *Human Life,* entitled, "The Mayos, Father and Sons." We note also your statement that this article was written and published without your knowledge or consent, and that thereafter copies of the publication containing it were sent to many of the medical profession, marked "sample copy," and that a few days later letters from publishers to members of the profession followed, calling attention to the article and soliciting subscriptions to the periodical containing it, all of which might inspire on the part of some the inference that you gentlemen had instigated or assented to the publication, which is the highly objectionable feature of the matter, and the cause of your complaint.

You ask our opinion as to what legal redress you have against *Human Life* on these facts. It is our opinion that you have no legal redress whatever. Two questions arise under these facts:

1. Was the article libelous?

2. If not libelous, was the act of mailing the sample copies to the profession an implied statement that it was done at your instigation, or with your consent?

While the article is an exaggeration, and in many respects untrue, in our opinion it is not libelous.

To constitute a libel the printed publication must either falsely charge a person with the commission of a crime or by false statements hold him up to ridicule or contempt of his fellowmen. The article in question does neither in a legal sense.

Whether or not the mailing of the marked sample copies constitutes an implied suggestion that it was done at your instigation or with your consent, admits of some doubt, but we are of the opinion that it does not. Whatever the real motive may have been in mailing these copies in this particular instance, the courts will take judicial notice that it is the custom of publishers to mail sample copies of their periodicals as a means of soliciting subscriptions, and, of course, that will be the purpose asserted in this case; hence if the original publication of the article did not constitute a libel, the sending out of marked copies would not do so. If the publishers were strictly within their legal rights in the publication of the article in question, the mere fact that the certain uninformed members of your profession might infer your connection with the publication, or that certain hostile members might make it a pretext by which to slander you, does not change the legal situation.

There is no doubt that you have been injured in the premises, from an ethical standpoint at least, but your case is known to the law as one of *damnum absque injuria,* or, in other words, injury without legal damage.

BROWN, ABBOTT & SOMSEN, Winona, Minn.

School Hygiene

To the Editor:—Dr. Gulick's article in THE JOURNAL, Jan. 10, 1909, recalls to my mind many of my experiences in Cleveland during the nine years, 1895 to 1904, when, under one title or another, I served the superintendent of instruction

in the purely advisory position of supervisor of school hygiene. Examination of the school records would show some betterment in sanitary conditions in the Cleveland schools. The best results were attained after the appointment by the board, out of its membership, of a committee on school hygiene. Later, through the intervention of powerful enemies this movement received a setback, and for five years Cleveland has had no department of school hygiene.

Thirty-three states have legislated on different aspects of school hygiene and all these enactments together form an array of sanitary legislation. Six years ago I secured the introduction into the Ohio State Legislature of a bill regulating the sanitary supervision and construction of schools. It met with no particular opposition and had there been money in the state treasury for its effective administration by the State Board of Health, it would probably have been pushed and passed; but unfortunately it came up at a time when the governor was opposed to all bills requiring appropriation. Since then no one has had interest enough to keep after it.

As to the introduction of school hygiene departments by boards of education in cities, I fear we can not hope for anything effective until we adopt government by commission, as in the case of Galveston or Berlin. At present, on account of the innumerable school and city officials, it is difficult to get attention for matters of this sort, for they are crowded out by the hustling political interests. It is difficult to educate a school or city official to an appreciation of sanitary values, and by the time this has been accomplished in any give case, some political revolution removes this supporter and everything has to be begun over again. Members of city boards of education are paid little or nothing, so that they usually delegate such school business as there is, to the officials they find in charge, and continue to give the best of their personal efforts to their own affairs, so that specialists in their employ are not understood or appreciated. Their work is not properly classified and coordinated by boards, and more or less conflict from the clashing of interests results.

There is a place in city schools at present for a few well trained school sanitarians with school officials who appreciate the value of school hygiene, but I fear such positions are the exception.

LEIGH K. BAKER, Cleveland, O.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BLOOD PRESSURE ESTIMATION

To the Editor:—What are the relative merits of the following forms of blood pressure apparatus: von Recklinghausen, Riva-Rocci, Stanton and Janeway? Which is the better for determining the systolic and diastolic pressure? Please give literature on blood pressure. EDWARD P. FICK, Seattle, Wash.

To the Editor:—What sphygmomanometer is best suited for the general practitioner's use? Please give literature on the subject of arterial tension. A. L. BRAMKAMP, Richmond, Ind.

ANSWER:—The sphygmomanometers on the market in general use are the Janeway and Stanton. The Stanton is perhaps the most durable for office and hospital work and is easily transportable without danger of breakage or escape of mercury. It has an 8 cm. armlet. The Janeway instrument has a 12 cm. armlet, is put up in more compact form and is consequently still better adapted for use in visiting practice. The Riva-Rocci instrument is liable to loss of mercury and breakage of the glass when transported. For systolic pressure any of the above instruments is quite accurate. The Riva-Rocci is somewhat less accurate than the others, as the means for producing change in pressure does not permit as accurate regulation. The von Recklinghausen instrument is undoubtedly the best for taking the diastolic pressure. The chief objections to this apparatus are its cost, difficulty of repair, and the necessity of occasionally comparing it with a mercury manometer, in order to determine its accuracy, since the mercury column is replaced by a spring.

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DETERMINATION OF TUBERCLE BACILLI IN SPUTUM AFTER METHOD OF PFEIFFER AND KITASATO

To the Editor:—1. Please describe the method of examination of sputum and determination of the type of mixed infection according to Pfeiffer and Kitasato. 2. Also tell me where in this country Spengler's P. T. and P. T. O. tuberculins can be obtained.

OSCAR H. BENKER, M.D., St. Louis.

ANSWER:—1. The method of examination of sputum according to Pfeiffer and Kitasato consists in collecting the sputum in a clean sterile vessel, and then washing a portion of the tenacious mucus through several tubes or plates containing sterile water, with a view to removing bacteria which may adhere to the surface of the mucus. By such successive washings through a sterile medium the mucus is largely freed from contaminating organisms obtained from the mouth, teeth, etc., and the organisms from the throat, trachea and bronchial tubes are chiefly left in the mucus, which is then spread on media, or preferably plated in the ordinary way and the bacteria isolated. 2. We are unable to learn that Spengler's tuberculins have been put on the market in this country.

TREATMENT OF KELOIDS

To the Editor:—A patient of mine has a small but very unsightly keloid on his neck under the chin, which originated from a small cut while shaving. What is the best way to remove it?

H. L. HAMILTON, Money, Miss.

ANSWER.—The only satisfactory way to treat a keloid is by exposure to *x*-ray. Excision is not successful because it is followed by larger growth than before and all other destructive measures meet the same difficulty. Treatment by thiosinamin has been recommended. Injections of this drug along with massage will cause temporary improvement, but the condition returns on the cessation of the treatment. By exposure to *x*-rays just short of producing a moderate reaction, or by the production of a moderate *x*-ray reaction, great shrinking can generally be produced in a keloid. Usually by treatment in this way it can be converted into a smooth flat scar.

FORMULA OF HARRINGTON'S SOLUTION

To the Editor:—Please give the formula of Harrington's solution. SUBSCRIBER.

ANSWER.—Harrington's solution consists of commercial alcohol (94 per cent.), 640 c.c.; hydrochloric acid, 60 c.c.; water, 300 c.c.; corrosive sublimate, 0.8 gm. It is intended for hand disinfection. The hands and arms should first be thoroughly washed with sterile soap and hot water and then bathed in the solution for half a minute or longer.

The Public Service

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 8, 1909:

Murphy, J. A., surgeon, detached from the Naval Medical School Hospital, Washington, D. C., and ordered to the *Olympia*.

Hart, S. D., appointed acting asst.-surgeon, from April 27.

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ended May 8, 1909:

Quinton, W. W., capt., Rockhill, E. P., capt., having been found physically disqualified for the duties of a major in the Medical Corps, are placed on the retired list as majors, to date from Feb. 26.

Bourke, James, capt., granted leave of absence for 3 months, 19 days.

Humphreys, H. G., capt., relieved from duty at Fort Terry, N. Y., and ordered to Fort Wadsworth, N. Y., for duty.

Appel, D. M., colonel, granted an extension of 1 month to his leave of absence.

Stephenson, Wm., lieut.-col., granted leave of absence for four months.

Marrow, C. E., major, granted an extension of 1 month to his leave of absence.

Page, Henry, major, granted leave of absence from June 10 to about July 21.

Kirkpatrick, T. J., major, granted leave of absence for 21 days, about June 7.

Grubbs, R. B., capt., left Fort McIntosh, Texas, on leave of absence for 10 days.

Loving, R. C., capt., left West Point, N. Y., on leave of absence for 10 days.

Persons, E. E., Bispham, W. N., majors, promoted to be majors in the Medical Corps, with rank from Jan. 1, 1909.

Farr, Chas. W., capt., granted an extension of two months to his sick leave of absence.

Wertenbaker, C. L., 1st lieut., M. R. C., ordered from Fort Wadsworth, N. Y., to Fort Terry, N. Y., for temporary duty.

Bowman, M. H., 1st lieut., M. R. C., ordered to duty with troops on the transport *Sheridan* to Manila, P. I., and return to San Francisco.

Brown, I. C., 1st lieut., M. R. C., relieved from duty in the Philippines Division in time to sail from Manila for San Francisco, Sept. 15, 1909.

Hammond, W. H., D. S., granted leave of absence for 2 months, 19 days.

Hussey, S. W., D. S., relieved from duty in the Department of the Lakes, and ordered to his home, South Berkeley, Cal., for annulment of contract.

Gunckel, G. L., D. S., left Fort Caswell, N. C., and arrived at Fort McPherson, Ga., for duty.

Voorhies, H. G., D. S., left Fort Yellowstone, Wyo., and arrived at Fort William Henry Harrison, Mont., for duty.

Zirker, D. W., C. S., assigned to duty at Fort Baker, Cal.

Knapp, E. V., C. S., assigned to duty at Fort Miley, Cal.

Dosher, J. A., C. S., contract annulled May 3, 1909, services being no longer required.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended May 7, 1909:

SMALLPOX—UNITED STATES

California: Oakland, April 12-19, 2 cases; Sacramento, April 17-24, 1 case.

Georgia: Macon, April 18-25, 5 cases.

Illinois: Danville, April 18-25, 12 cases.

Indiana: South Bend, April 18-25, 1 case.

Kansas: Kansas City, April 17-24, 3 cases; Wichita, 1 case.

Kentucky: Covington, April 17-24, 1 case; Lexington, 1 case; Newport, 1 case.

Louisiana: New Orleans, April 18-24, 5 cases.

Maryland: House of Correction, Bridewell, March 18-April 27, 10 cases.

Michigan: Grand Rapids, April 18-24, 1 case; Saginaw, 1 case.

Minnesota: Duluth, April 15-22, 1 case; Minneapolis, April 10-24, 5 cases; St. Paul, Feb. 1-March 31, 68 cases.

Missouri: Kirksville, Jan. 1-April 17, 1 case; St. Louis, April 17-24, 1 case.

Montana: Butte, April 13-20, 2 cases.

Nebraska: Polk, March 20-April 26, 14 cases.

New Jersey: Camden, April 17-24, 3 cases.

New York: Little Falls, April 10-24, 2 cases.

North Carolina: Nineteen counties, Feb. 1-28, 20 cases.

Ohio: Cincinnati, April 10-24, 10 cases; Columbus, April 17-24, 2 cases; Conneaut, March and April, 2 cases.

South Carolina: Yorkville and vicinity, April 26, 8 cases; Nashville, 1 case.

Texas: San Antonio, April 17-24, 1 case.

Utah: Salt Lake City, March 1-31, 62 cases.

Virginia: Botetourt County, April 28, 100 cases; Portsmouth, April 20-27, 1 case.

Washington: Spokane, April 10-17, 3 cases; Tacoma, March 7-April 4, 9 cases.

Wisconsin: La Crosse, April 17-24, 1 case; Milwaukee, April 17-24, 9 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, March 6-13, 8 cases, 3 deaths.

SMALLPOX—FOREIGN

Algeria: Algiers, March 1-31, 17 deaths.

Austria: Trieste, March 20-27, 1 case.

Brazil: Rio de Janeiro, March 14-28, 42 cases, 16 deaths; Sao Paulo, March 1-14, 2 deaths.

Canada: Halifax, April 10-17, 1 case.

China: Amoy, April 13-20, present; Hongkong, March 6-20, 5 cases, 4 deaths.

Egypt: Cairo, March 18-25, 16 cases, 11 deaths.

Great Britain: Bristol, March 27-April 10, 7 cases, 1 death; Cardiff, March 3-10, 1 case.

India: Bombay, March 23-31, 31 cases; Calcutta, March 13-20, 305 cases; Rangoon, 9 cases.

Mexico: Guadalajara, April 8-15, 4 deaths; Monterey, April 11-18, 7 deaths; Veracruz, April 11-18, 1 case.

Russia: Odessa, March 27-April 3, 6 cases; St. Petersburg, March 20-27, 11 cases, 6 deaths; Warsaw, Jan. 30-Feb. 6, 2 deaths.

Spain: Barcelona, March 5-12, 3 deaths; Huelva, March 1-31, 2 deaths; Valencia, April 2-9, 5 cases.

Turkey: Constantinople, March 28-April 11, 1 death.

YELLOW FEVER

Barbados: April 10-17, 1 case, 1 death.

Brazil: Manaos, March 13-April 3, 5 deaths; Para, April 3-10, 3 cases, 3 deaths.

Mexico: Merida, Feb. 27-March 6, 1 case; Ticul, April 1-24, 2 cases, 1 death.

CHOLERA—INSULAR

Philippine Islands—Provinces, March 6-13, 262 cases, 113 deaths.

CHOLERA—FOREIGN

India: Bombay, March 23-30, 1 death; Calcutta, March 13-20, 101 deaths; Rangoon, 3 deaths.

Russia: General, March 6-20, 76 cases, 27 deaths.

PLAGUE

Brazil: Rio de Janeiro, March 14-28, 2 cases.

Chile: Antofagasta, April 3, 11 cases; Iquique, 17 cases.

China: Canton, March 6-20, 35 cases, 30 deaths; Hongkong, March 16-20, 5 cases, 6 deaths.

India: Bombay, March 23-30, 450 deaths; Calcutta, March 13-20, 77 deaths; Madras, March 20-26, 1 death; Rangoon, March 13-20, 16 deaths.

Japan: Formosa, March 27, present; Kobe, March 20-27, 1 case, 1 death.

Peru: General, March 27-April 10, 76 cases, 34 deaths; Callao, March 29-April 10, 5 cases, 1 death.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended May 5, 1909:

Kerr, J. W., asst. surgeon-general, directed to proceed to Cincinnati, O., on special temporary duty.

Irwin, Fairfax, surgeon, relieved from duty on the Revenue Cutter *Rush*, and directed to report to the commanding officer of the Revenue Cutter *Thetis*.

Stimpson, W. G., surgeon, granted 5 days' leave of absence from May 3, 1909.

Stimpson, W. G., surgeon, relieved from duty at Port Townsend, Wash., and directed to report to the commanding officer of the Revenue Cutter *Manning*.

Lavinder, C. H., P. A. surgeon, directed to proceed to Columbia, S. C., and vicinity on special temporary duty, May 3, 1909.

Ramus, Carl, P. A. surgeon, granted 1 day's leave of absence, April 29, 1909, on account of sickness.

Moore, Dunlop, P. A. surgeon, granted 1 month's leave of absence from May 3, 1909, on account of sickness, and 3 months' leave of absence from June 3, 1909, with permission to go beyond the sea.

Fox, Carroll, P. A. surgeon, relieved from duty at San Francisco, and directed to report to the commanding officer of the Revenue Cutter *Bear*.

Amesse, J. W., P. A. surgeon, directed to proceed to Calbarien, Cuba, on special temporary duty.

Stimson, A. M., P. A. surgeon, granted 2 days' leave of absence, May 1 and 3, 1909.

Simpson, F., asst.-surgeon, relieved from duty at Fort Stanton, N. M., and directed to report to the commanding officer of the Revenue Cutter *Perry*.

Lanza, A. J., asst.-surgeon, relieved from duty on the Revenue Cutter *McCulloch* and directed to report to the commanding officer of the Revenue Cutter *Rush*.

Bowers, Paul E., acting asst.-surgeon, granted 1 day's leave of absence in April, 1909, under paragraph 210, Service Regulations.

Delgado, J. M., acting asst.-surgeon, granted 9 days' extension of annual leave from April 15, 1909, on account of sickness.

Gregory, George A., acting asst.-surgeon, granted 7 days' leave of absence from May 4, 1909.

MacCaffry, W. B., acting asst.-surgeon, granted 2 days' leave of absence in April, 1909, under paragraph 210, Service Regulations.

Rea, Robert H., acting asst.-surgeon, granted 3 days' leave of absence from May 6, 1909.

Rea, Robert H., acting asst.-surgeon, granted 1 day's leave of absence, April 26, 1909.

Rush, John R., acting asst.-surgeon, granted 3 days' leave of absence from April 20, 1909, under paragraph 210, Service Regulations.

Wakefield, H. C., acting asst.-surgeon, granted 4 days' leave of absence from April 28, 1909, under paragraph 210, Service Regulations.

BOARDS CONVENED

Board of medical officers convened to meet at the Marine Hospital, Baltimore, May 1, 1909, for the purpose of conducting a physical examination of eight cadets of the U. S. Revenue-Cutter Service for commissions as third lieutenants. Detail for the board: Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.

Board of medical officers convened to meet at the Maine General Hospital, Portland, Me., May 3, 1909, for the purpose of conducting a physical examination of a captain of engineers of the U. S. Revenue-Cutter Service. Detail for the board: Surgeon P. C. Kalloch, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

Board of medical officers convened to meet at the Bureau, May 4, 1909, for the purpose of conducting a physical reexamination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; P. A. Surgeon J. W. Trask, recorder.

Board of medical officers convened to meet at the Marine Hospital office, Philadelphia, May 4, 1909, for the purpose of conducting a physical reexamination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: Surgeon J. M. Gassaway, chairman; Acting Asst.-Surgeon H. Horning, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Pioneer Press Helps to Suppress Quacks

In the *St. Paul Medical Journal*, May, appears an editorial announcement stating that the *St. Paul Pioneer Press* has discontinued carrying offensive medical advertisements, especially those of the Heidelberg Medical Institute and of "Dr. Charles," who, according to the *Journal*, have been notified that with the expiration of their present contracts, they can no longer advertise in the *Pioneer Press*. This step is taken at considerable financial sacrifice.

The *Journal* appeals to the profession and to the public to support the *Pioneer Press* in the effort which it is making to publish a clean newspaper, saying truly that the only way in which quacks and charlatans can flourish is through newspaper advertising, and that with these channels of publicity barred they must either move or go out of business. "The medical profession has been practically helpless in spite of all laws to accomplish anything against this form of quackery, but now that the newspapers have taken the matter up, the rest will be easy. The *St. Paul Dispatch* has also announced that it will clean up its columns, but whether or not it will go so far as the *Pioneer Press* we are unable to say. We hope it will."

In view of the fact that one of the most pernicious and long-lived "medical institutes" in the west came from St. Paul originally and resumed business in that city after having been driven out of a neighboring state, the campaign against dishonest medical advertising in St. Paul is of particular interest. Surely, the Ramsey County Medical Society, one of the strongest and most influential county organizations in the west, can furnish the editors and proprietors of the local press with enough evidence and can wield enough influence to bar these objectionable advertisements from the local newspapers. As soon as the charlatan is compelled to cease advertising, he ceases to do a profitable business. We wish that the good example of the *Pioneer Press* might be followed by newspapers throughout the country.

Dr. McCormack in Kansas

The last two weeks of April were devoted by Dr. J. N. McCormack to a series of meetings in Kansas, comprising fourteen public meetings, two being held in each Councilor District as follows: April 14, Atchison; April 15, Hiawatha; April 16, Manhattan; April 17, Abilene; April 19, Norton; April 20, Beloit; April 22, Larned; April 23, Garden City; April 24, Newton; April 25, Wellington; April 27, Independence; April 28, Pittsburg; April 29, Leavenworth; April 30, Lawrence. The press of the state has been unanimous and outspoken in commendation of the meetings and of the efforts made for public instruction.

The Larned *Chronoscope* says: "The lecture given by Dr. McCormack at the Woodman Hall last Thursday night probably gave more enjoyment and genuine instruction than any that has ever been delivered in Larned. The large audience present listened with the closest attention for nearly two hours while Dr. McCormack expounded truths with almost startling vigor and clearness."

The Sumner County Star, commenting editorially on the Wellington meeting, says: "Those who attended the lecture in the Auditorium by Dr. McCormack last night heard . . . one whose teaching if carefully followed would result in inconceivable help the world over. . . . He struck fearlessly at the evils and shortcomings of society that are responsible for a large part of disease, ever keeping his audience in mind that it was not so much that he wished to criticize as to correct the existing conditions. . . . Dr. McCormack showed that while the government is spending three out of every four dollars of revenue on the Army and Navy and pensions, for the slaughter of humanity, it spends not one cent for the preservation of human life and the prevention of disease. The people should not forget his splendid advice and should assist in every way possible to bring about the needed reform."

The Pittsburg *Daily Headlight* says: "With the medical association, the ministerial association and the city Federation of Women's Clubs joining in the lead, the citizens of Pittsburg are called on to conduct a new crusade, a war on disease. Last night at a meeting of citizens which crowded the First Christian Church to the doors, the crusade was begun. . . . As a result of the meeting last night, public sentiment is to be aroused to the danger of allowing disease to have full sway and steps will be taken to conduct a warfare, systematic and well organized."

The Independence *Daily Reporter* says editorially: "The address of Dr. McCormack at the Presbyterian Church on health and prevention of disease was a discourse every grown person in the city should have heard. . . . The lecture was of vital importance to the public."

Dr. W. H. Cook, secretary of the Mitchell County Medical Society, writes regarding the Beloit meeting: "In spite of a rainy night, the opera house was crowded so that many stood during the entire two hours that Dr. McCormack was speaking. . . . The physicians of the county feel well repaid for the time we spent in getting an audience for Dr. McCormack and to my mind, great good will come to the people of Beloit on account of his visit."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR

BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Third Weekly Meeting

METHODS OF EXAMINATION

PHYSICAL EXAMINATION.—Light, reflection: instruments, speculum. Retraction of auricle. Normal tympanic membrane;

diseased membrane. Inflation of middle ear: Valsalva method, technic of Politzerization. Catheterization of Eustachian tube.

FUNCTION OF EAR.—Watch test, voice test, tuning-fork tests.

EFFECTS OF NASOPHARYNGEAL AND NASAL AFFECTIONS ON THE EAR

Adenoids; symptoms, diagnosis. Faucial tonsils. Nasal obstructions and inflammations.

MIDDLE EAR

ACUTE MYRINGITIS.—Etiology, symptoms, diagnosis.

CHRONIC MYRINGITIS.—Symptoms, treatment.

INJURIES OF DRUM MEMBRANE.—Character, pathology, treatment.

ACUTE TUBOTYMPANIC CATARRH.—Causes, symptoms, prognosis, treatment.

ACUTE CATARRHAL OTITIS MEDIA.—Etiology, prognosis, treatment.

ACUTE SUPPURATIVE OTITIS MEDIA.—Etiology, symptoms, diagnosis, treatment. Incision of membrane, not "puncture." Local treatment, irrigation, etc., for pain.

CHRONIC PURULENT OTITIS MEDIA.—Symptoms, prognosis, treatment, medicinal and surgical.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE: Dover and Wilmington, June 15-17. Sec., Dr. Henry W. Briggs, Wilmington.

FLORIDA ECLECTIC: De Funiak Springs, June 10. Sec., Dr. Hiram J. Hampton, Tampa.

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.

ILLINOIS: Coliseum Annex, Chicago, June 16-18. Sec., Dr. J. A. Egan, Springfield.

IOWA: Des Moines, June 1-3 and June 22-24; Iowa City, June 8-10. Sec., Dr. Louis A. Thomas, Des Moines.

KANSAS: Kansas City, June 10. Sec., Dr. R. A. Light, Chanute.

MARYLAND: Baltimore, June 15-18. Sec., Dr. J. M. Scott, Hagerstown.

MICHIGAN: Ann Arbor, June 8. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: Minneapolis, June 15. Sec., Dr. W. S. Fullerton, St. Paul.

MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.

NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.

NEW HAMPSHIRE: Concord, June 29-30. Regent, Mr. H. C. Morrison.

NEW JERSEY: State House, Trenton, June 15-16. Sec., Dr. J. W. Bennett, Long Branch.

NEW YORK: Albany, May 18-21 and June 22-25. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

NORTH CAROLINA: Asheville, June 9. Sec., Dr. B. K. Hays, Oxford.

OHIO: Columbus, June 8-10. Sec., Dr. George H. Matson, State House, Columbus.

PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Mr. Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: Columbia, June 8-10. Sec., Dr. H. H. Wyman, Aiken.

TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.

VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.

WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Homeopathy at the University of Minnesota

For twenty years there has been a separate homeopathic department at the University of Minnesota teaching all the medical courses of the junior and senior years. Thus at great expense a separate department was maintained and the teaching of many courses unnecessarily duplicated. All the work of the first two years has long been taught by one department. Since the attendance had gradually dwindled until only three students remained, the Board of Regents on May 6, abolished the homeopathic department, feeling that, however worthy the cause, they were not justified in so great an expenditure to support it. Provision was made for two elective chairs in homeopathic materia medica and in homeopathic therapeutics. It was also provided that students electing such work should be granted diplomas specifying that they were in homeopathic medicine.

University of Minnesota Appropriations

The Minnesota legislature at its last session appropriated $440,000 for new buildings at the University of Minnesota. Of this sum $200,000 was for a new anatomical building, $200,000 was for a second medical laboratory building, and $40,000 was for an addition to the Elliott Hospital bequest of $115,000, thus making a total of $155,000 for the hospital building. The sum of $350,000 was also appropriated for the enlargement of the campus, $500,000 having already been expended during the last two years. With these appropriations there is now a sum of over $1,000,000 available for the erection of new buildings on the university campus within the next two years.

Two-Part Examinations for License

Dr. E. J. C. Sward, secretary of the State Board of Health of Nebraska, states that hereafter at all examinations, those who have completed the first two years of the medical course in any unrecognized medical college will be allowed to take examinations in the branches completed, the credits thus obtained to be accepted toward the examination for license after graduation. There are now seven states which have made this provision, the others being Colorado, Iowa, Maryland, Michigan, New York and Virginia.

Minnesota License Examinations

The following notice was received from Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners:

"The Minnesota State Board of Medical Examiners, at its regular April, 1909, meeting, adopted the following: 'All applicants for license will be required to take a practical examination in laboratory work in pathology, histology, bacteriology and urinalysis and in clinical diagnosis, and in such other branches as from time to time may be deemed advisable. Reciprocates, when coming from boards which do not require this examination, must take it before this board as a supplementary.

"'This rule goes into effect at once and will be enforced at the June, 1909, examination and subsequently.

"'All applications must be on file with the secretary on or before the first of January, April, June and October for the examinations of those respective months.

"'The next examination will be held at the State University, Minneapolis, beginning at 9 o'clock a. m., Tuesday, June 15. The practical examination begins at 9 o'clock a. m., Thursday, June 17.'"

National Meeting of Examining Boards

The National Confederation of State Medical Examining and Licensing Boards will hold its nineteenth annual meeting at Atlantic City, N. J., Monday, June 7, 1909, in the Park Avenue hall of the Hotel Marlborough. The subjects to be taken up at this meeting relate to the standing of medical colleges, and practical, oral and divided examinations before state medical examining boards. These topics at this time are urgent, practical and vital to the maintenance and development of the influence and efficiency demanded of state boards, both by the profession and by the state. Among the contributors of papers to this meeting are men of the highest standing in the medical profession, and their production will undoubtedly be of great value. An earnest and cordial invitation is extended by that body to all members of state medical examining boards, and all others who are interested in this work. The officers of the confederation are: A. Ravogli, M.D., acting president, 5 Garfield place, Cincinnati; Murray Galt Motter, M.D., secretary, 1841 Summit place, Washington, D. C.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel, Chicago, April 5 1909

(Continued from page 1523)

Character of the State License Examination

DR. FLEMING CARROW, Detroit, read the following paper:

The character of the state license examination must, of necessity, depend on, and in its scope and limitation, be regulated and controlled by, the teachings in the medical schools. When you advance the standard of your schools, our scope is broadened; if you narrow your instruction and shorten your medical course, the licensing board must necessarily conform to your teachings or refuse to examine your graduates.

The state board is not an educational institution, any more than it is a detective agency, for the apprehension of unlicensed and illegal practitioners of medicine. It is a body created by statute, operating within the state which called it into existence, and is in its character judicial, executive and advisory. Its scope and its function, therefore, can no more be governed by the ideas of individual educators than can the business of the interstate commerce commission be administered by the congress which created it.

It follows, therefore, that the function of the state licensing board must be advisory; to tell the educator what the law requires and it is the part of the educator to see that his school fulfils those requirements.

PRELIMINARY EDUCATION

If the law requires that a student beginning the study of medicine shall have had a standard high school education preparatory to that study, the board can not consistently admit to its examinations a graduate who has had less than that requirement. Less than that requirement may, in the opinion of the educator, be enough, but it does not fulfil the law governing such cases. The position I take, therefore, that the board is advisory as well as judicial and executive in character, seems to be a logical one.

The character of the state license examination: Is it good, sufficient and comprehensive? Or is it bad, inefficient and narrow? These questions all hark back to the academic one, is your medical education good? This, in turn, leads us to inquire, what of the preparatory school?

It seems to me that the senior year in the preparatory school should embrace more than the sciences. History should have a larger place in the mental preparation of the prospective medical student. The knowledge of at least the equivalent of "McLaughlin's History" should be insisted on; not alone because it is history, but because it is an eminently good training for medical study. There should be more to preparatory work than 60 counts. An elective course of study, best suited as the foundation of professional work, is of prime importance. Much more time might, with advantage, be given to the literature of at least two modern languages, some of which might be taken from physics.

MEDICAL TRAINING

As to the strictly medical training; if a man has been properly prepared in a preparatory school, four years is ample, if the medical college is a good one; if the instructors are trained teachers; if they are salaried men and can afford to give all the time necessary to teaching and do not have to shorten the lecture hour by the necessity of making a call, for a fee.

The man who comes before his class with a last year's lecture must not be surprised if his student fails when he reaches the state examining board, so, as I said, the character of the state examination depends on the character and fitness of the medical teacher.

If you think the state board is easy, may it not be because the educator has failed in his duty? One of my examinations in anatomy was pronounced too hard by one of the instructors at the University of Michigan, yet every student passed it, simply because the teacher who was then there was almost without a peer in this country. I knew that his students could pass any examination you could give them in anatomy.

The art of imparting knowledge is not possessed by every man who writes "Professor" before his name. The really good surgeon is not always he who can make the most graceful curves in the air with a scalpel, but rather the one who, without the flourish of the studied gesture, makes his incision just where it should be.

The state examination will be comparatively simple if your school is proportionately thorough; and here the question should be considered: How shall the examination be conducted? Should it be written or oral? Should it be a laboratory or a clinical examination? Abroad, all four of these methods are in use. The written examination is, of all others, the poorest, yet it has the widest use. There are many men for whom it is easy to write a learned discourse (?) on any subject embraced in a medical course, and yet they may be totally unqualified for the practical side of medicine. It is a matter of common observation to see a man coming from a poor school, where there is but little teaching in laboratory and clinical work, stand high in a written examination.

His course has been largely a "cramming course" from quiz-compends; his written examination is quite in line with his habits of study and he passes well.

EXAMINERS TOO POORLY RECOMPENSED

As to the oral examination, the time which the average board member can give to such work, is not sufficient. Feeling that he is not recompensed by the state for his services, the first question he asks on arriving at the place of examination is, "When can I get a train home?" The remedy for this is to have a board, the members of which are not so actively engaged in practice that they can not give all the time necessary for the performance of this most important duty. The examiner should therefore be paid by the state.

The two remaining forms of test examination—in laboratory and clinical work, can not be conducted by the average state board man, because of his lack of knowledge of laboratory and clinical methods and technic. This again, could be remedied by the selection of laboratory and clinical men not connected with medical schools for the state board, these men to be under state commission and paid by the state.

THE IDEAL EXAMINATION

The ideal test examination would embrace all four of these methods, and it remains for this Council to suggest to the state board a plan whereby some such scheme may be made possible. The tests used to-day are inefficient and unsatisfactory, and it is to be hoped that in the near future, some remedy will be devised which will enable us to satisfy ourselves as to an applicant's fitness to practice medicine.

You, gentlemen, are absorbed in telling us how a man should be educated. We listen attentively and give weight to your advice. Does it not seem anomalous and out of the regular order, to expect the state examiner to do anything less than pass your student? Have you not prepared him for this very event, and has he not the right to pass successfully if you have taught him efficiently? It seems so to me. If you are building the machinery of a medical education properly it should not "slip a cog" when you pass the throttle to our hands.

The real fact is, and here lies the trouble, there are too many medical schools; and where there are so many, some are bound to be poor.

Again, teachers of medicine are not always selected for their fitness. In proprietary schools, some teach because they own stock. In the universities many other things enter into the securing of instructors besides their ability and preparedness to impart the knowledge they may have.

As an improvement along these lines I would suggest a general matriculation law for all schools; the state board to examine all who wish to matriculate in the medical colleges. Allowing students to enter on medical study with conditions in their preparatory work should be discontinued, as such a man is handicapped in his entire medical course.

In Michigan the board of registration in medicine is the supreme medical authority in the state—and if we are logical it should be given the oversight of the prospective medical student as well as of his fitnes to engage in practice after he has finished his course in the medical college. With us this plan is in force, and it is as nearly perfect as can be. The manner of conducting the examinations becomes a secondary matter, therefore, if all medical colleges in the state have the same curriculum and prepare their students thoroughly.

Gentlemen, in conclusion, let me say that it is not entirely by the recommendation of higher standards of medical education that great things are to be accomplished now-a-days. There should also be more stringent laws enacted giving

greater power to the examining boards in order that schools which are not efficiently equipped to properly teach medicine can be closed and thereby prevented from graduating students solely by the cramming process.

DISCUSSION

DR. WILLIAM T. COUNCILMAN, Boston: The State Board of Medical Examiners have two distinct duties under their office. They serve in the first place to protect the public from the admission of men unfit to practice medicine. Medicine to-day calls for a different training and a somewhat different order of men from those who have served it in the past. The medical man of to-day must be trained in the methods of science because it is by the application of methods that the conditions of disease are investigated.

In the second place the examination must protect the medical profession, not in the narrow way of restricting the entrance into the medical profession as a trade union would, but by eliminating the unfit from entrance into the profession. If unfit men enter the medical profession it will gradually lose that respect and confidence of the public which it must have in order to attain its highest excellence and usefulness.

HOW EXCLUDE UNFIT MEN?

The demand for medical examining boards has come from the medical profession. Although the medical schools encouraged the movement, it came directly from the medical profession and not from the public, and to the medical profession, as I have said, the state boards have a definite duty. How shall the state examining boards exclude the unfit men? We believe that for the study of medicine a certain preliminary training is essential. This training consists chiefly in the study of the sciences, for on the ground work of science medical education depends. The state boards are within their rights in demanding that before entering on his medical education the medical student shall have had such a training. It is further true that they can exercise a certain amount of supervision over the medical schools of the state, but that, I think, is extraordinarily difficult. How can a state board of examiners know whether the methods of instruction which are adopted in any particular school are the best methods? Medical education is at the present time in such a condition of uncertainty that we do not know what are the best methods, and certainly the state boards can not decide. Moreover, how is the state board to decide whether the methods advertised by a medical school are on paper only or whether they are actually enforced. Those of us who have had much experience with catalogues of medical schools know that the imagination is not carefully restricted in the preparation of the catalogue. Nothing could be worse for the state of medical education in the country than a demand on the part of a state board of education that the instruction in the medical schools of the state should conform to a definite curriculum. The success of any order of studies will depend on the facilities which the school has and on the character of its teachers. If a medical school with very unusual methods of instruction turn out men of a high class, those men should pass the examining boards. Even if medical schools admit candidates who have had none of the preliminary education, which is generally regarded as essential, and if still by very careful methods of instruction they turn out a suitable product their product should be admitted into the medical profession. It seems to me that the amount of good which the state board of examiners can do by insisting on preliminary training and methods of teaching in the schools themselves is very limited.

CHARACTER OF EXAMINATION MOST IMPORTANT

The selection of men can be determined only by an examination and on the character of this examination everything depends. In the beginning and up to the present time the examination has been a written one. Certain formal questions are asked and the candidate writes out the answers. That this is the easiest and the quickest method of examination no one will deny. That it is an absolutely unsuitable method every one who has been engaged in teaching and examining students will recognize. In the first place there is a very great difficulty in the preparation of questions which will really test a candidate's knowledge. It is only possible to ask a certain number of questions on any subject. In the yearly preparation of examinations certain questions will recur in spite of the examiner. It is hardly possible to ask more than one hundred questions on any subject. These examinations in the beginning undoubtedly stimulated the schools but the poor schools quickly rose to the emergency and their instruction was based not on rendering a student fit for the high duties of the profession but on making him capable of passing the examination. The matter of examination passing has been rendered very much more facile by the preparation of quiz compends in which the questions of state boards are analyzed and suitable answers given. Any man of proper intelligence by the use of such a quiz compend can prepare himself in the course of a few months for such an examination without any real medical training at all.

The examination for admission to the practice of medicine should not be a written examination, to show what the candidate remembers and can write, but a practical examination to show what he really knows and can do. The real efficiency of a medical man depends largely on his knowledge of methods of diagnosis and treatment and his facility in the use of these methods, and that a candidate has this knowledge and ability can only be tested by the actual demonstration. This, I think, will be admitted on all sides.

PROVISION FOR PRACTICAL EXAMINATIONS

The objections which are urged against such methods of examination are numerous. In the first place it is said that the examiners themselves at present are incapable of conducting such examinations. If this be true, and I hardly believe it, they should give up their offices to those who are capable of conducting such examinations. In accepting the position they have assumed certain duties, and if not capable of fulfilling them they should not occupy the positions. It is also said that the state boards have not the facilities for conducting such examinations. This is not true. I feel perfectly sure that every assistance will be given to the state examining boards by the medical schools in the state. They will offer their laboratories and all their facilities. The examination should not be held in places were facilities of this sort can not be provided. The laboratory side of the practical examinations is the least. The practical examination should embrace the clinical as well as the laboratory side of medicine. There is no difficulty whatever in providing material for the clinical examination. In every city where the examination would be held there is enough ambulant dispensary material to provide for the examination. Even the facilities of a hospital would be extended to the state boards if they asked for them and used them properly. By this clinical examination the student should show that he is thoroughly trained in the methods of diagnosis by auscultation and percussion, and in all of the clinical methods; that he understands the principles of antiseptic surgery and can apply them; that he knows his regional anatomy and can apply his knowledge in the diagnosis of internal conditions. Another objection which is raised is that such an examination to be effective will occupy more time than the written examination. Undoubtedly this is true and more time must be given to the examinations. If the emoluments of the office do not justify this expenditure of time on the part of the examiner the emoluments should be increased. The state could easily meet the increased expense by exacting a higher fee for the examination. There is no reason why the fee should not be at least $100. The cry of the poor boy will be at once raised, but if the poor boy has the proper material in him he can easily get together the money. He has gotten together much more for his medical education. It is not justifiable to make a whole system of examinations ineffective by the lack of funds.

PRACTICAL EXAMINATIONS COMMON ELSEWHERE

We as a medical profession and as a part of the public should insist on this practical examination. The best medical schools would welcome it, because they do not fear the application of any suitable test to determine the fitness of their method. It will be opposed by certain of the schools who are training men to pass examinations as at present conducted. It seems rather absurd that we should say that the practical examination can not be held here when it is held in every country in Europe and in Canada. I can not avoid speaking strongly on the matter because it is one to which I have given a great deal of thought. It seems to me that the state boards have the matter of medical education entirely in their own hands. They can demand that the medical schools shall turn out a fit product. The state examiners hold the most important medical positions in the state. They have a greater responsibility than that of a teacher in a medical school, and greater than the state health officials. I firmly believe that they will rise to this responsibility and show that this country must not stand behind other countries in the selection of the

men who are fit to enter the ranks of the profession. The practical examination will also do away with the difficulties arising from the different schools of medicine. If a man shows that he has knowledge of methods and facility in the application of these methods in the recognition and in the treatment of disease he can be trusted no matter under what medical sect he chooses to array himself.

SOME RESULTS OF HIGHER STANDARDS OF PRELIMINARY EDUCATION.

BY R. H. WHITEHEAD, UNIVERSITY OF VIRGINIA.

The revolution in medical education which has been going on in the past ten or fifteen years is characterized by four prominent features: 1. Better preparation of students before admission to the schools. 2. Thorough training in the fundamental medical sciences by laboratory methods as a means to such a good understanding of the subjects studied that the student shall be able to keep abreast of advances in medical science in after years. 3. Better training in the clinical branches by methods which permit and enforce personal study of disease and its management in living people. 4. The employment of trained teachers to whom teaching and investigation are primary, not secondary, considerations.

The first of these is the most important, since it is fundamental to the others; without suitable preparation of the student, other measures are for the most part ineffectual. Accordingly, while I have in mind in a general way all the features of the newer standards, this paper is concerned chiefly with the item of preliminary education.

As the result of conjoint action of various bodies, there are two standards of preliminary education now before us: The first demands the completion of a four-year high school course, or an equivalent amount of education. While it is the present standard of the majority, perhaps, of our medical schools, it is recognized that it is far from satisfactory, and that it is merely a temporary halting place. The other requires, in addition to the high school course, a year's work in college chemistry, physics, biology and a language, preferably German. As a matter of fact, it means, in most cases, two years of college work, as our college curricula are now constructed. In 1910 this or a higher requirement will be in force in almost all of our university medical departments.

As I am connected with a school which for the past two years has been requiring for admission the completion of a year of college work in chemistry, physics and biology, your secretary has asked me to present a statement of our experience with, and some observations on, a requirement which is quite similar to the one which is to receive such wide adoption in 1910.

We may consider the subject from two standpoints: pathologic and economical. Pedagogically speaking, the requirement has been beneficial in various ways: The great maturity and more earnest spirit of the students are, of course, decided gains; and the technical knowledge and training in the fundamental preparatory sciences possessed by them have enabled the instructors to improve the character and quality of their courses greatly. But the greatest, the almost inestimable value of the requirement, in my experience, is the fact that it constitutes a barrier between the medical school and the obviously unfit. The incapable student, the chronic idler, and the man to whom the study of natural science is distasteful, are kept out of the school. I should say, then, pedagogically speaking, that the greatest value of the requirement is its efficiency as a sifter, separating the chaff from the wheat.

I should like to digress at this point to say a few words as to the character of the courses in physics and biology, which, it seems to me, are desirable for the prospective medical student. The course in physics at the average college, so far as my experience goes, is either almost entirely theoretical with little laboratory work, or specialized and adapted more particularly to the needs of the engineering student. It is, in either case, a study of mathematics rather than of Nature, and it is often so difficult that students who are deficient in mathematical talent are almost certainly doomed to failure. Is it not possible to devise good college courses in physics designed to meet the needs of medical men, courses which shall be less mathematical and deductive, more experimental and inductive? And the courses in biology might be improved in my opinion by a fuller consideration of the great biological conceptions which have so profoundly influenced modern thought.

I come now to the economic side of our question. Ours is a small department of one of the smaller universities. The effect of the introduction of this requirement on attendance was to reduce the size of the entering class 50 per cent., and at the end of two years the total attendance has been reduced about 30 per cent., at which point, we hope, the reducing process will stop. Recently I have examined the statistics of 21 representative schools which have raised their entrance requirements within the past few years; in many cases the increase was only to a high school course. The average reduction in attendance in these schools at the expiration of two or three years was 42 per cent.; that is, these schools suffered a loss of nearly one-half of their students as compared with the enrollment before the raise in standard. It seems perfectly clear that the wide adoption of the standard which we are discussing will produce a considerable diminution in the size of the annual increment to a badly overcrowded profession, accompanied by a great improvement in the average quality of that increment. The young medical man of the early future is going to be a much more efficient practitioner, and better able to lead and direct in matters pertaining to the public health.

In this connection we must not forget our debt of gratitude to those university presidents and trustees, who, in spite of the costliness of a modern medical school, and in spite of the general indifference of the public to the ideals of medical education, have had the courage and the wisdom to devote so much of their ability to this phase of public service.

I come next to a most important consideration: What should be the attitude of the state examining and licensing boards to this standard? For a long time one of the principal functions of these bodies has been to persuade and compel medical schools to enforce a certain minimum standard of preliminary education—and doubtless there is necessity for a continuance of this function; but the situation is now, in a way, reversed, and the question is, Can and will the boards adopt the higher standard set up by many of the schools and advocated by this Council? It is clear that the boards of some localities can not do so; local conditions would not justify and sustain them. On the other hand, some boards more fortunately situated have already adopted it; and there are various other states whose boards possess the necessary authority and whose conditions fully warrant such action. The advantages of this standard to the medical profession and to the public would still be evident, no matter what action the boards may take; but it is certain that its benefit can not be reaped fully unless a considerable number of the boards approve and support it. In all probability many medical schools will continue to maintain just as low a standard as the boards will allow.

"Every situation in life has its advantages and its disadvantages." Let us glance for a moment at one of the disadvantages of the present situation. The recent inspection of medical schools, conducted by the Council, has revealed quite a number which, even under a most liberal system of grading, can not be regarded as doing acceptable work. Many of the states are protected against the graduates of such schools by the fact that their examining boards have the authority to refuse recognition to schools which fall below their standards. But there are other states whose boards are compelled by law to examine any graduate of any medical school. Accordingly, the graduates of these discredited schools, being excluded from the majority of the states, will naturally gravitate toward to the places of least resistance; and numbers of them will get by the boards, if only written tests are relied on to stop them. There is in the present situation a distinct menace both to the profession and to the public of such states, which should be met promptly, either by holding practical examinations for license, or by securing the necessary changes in the medical acts.

Finally, a word as to medical education in the south and its relation to higher standards of preliminary education. Here, I regret to say, are located a considerable number of the schools which have been discredited by the Council; here almost none of the examining boards have the authority to discriminate between schools, and here it will be difficult to secure such authority from the legislatures; and here, through the operation of causes which are perfectly natural and well understood by all who are acquainted even superficially with the history of the country, popular education has lagged behind the progress made in many other sections, so that the proper educational basis for high standards in medicine has

been developed very imperfectly as yet. There are a number of old and well-established medical schools in the south to whom the proposition to adopt the Council's standard would be equivalent to a request to commit suicide. And even if the schools were to be so obliging as to accede to the request, their places would be taken immediately by others not so good. The difficulties can not be met by the adoption of standards not justified by the local conditions; but I am confident that it would be a mistake, so far as the south is concerned, for this Council to lower the standard out of consideration for southern difficulties, or for any other reason. On the contrary, the south needs that standard as a goal to be striven for; and it must not expect other sections of the country to retard their own progress. It must, in large measure, work out its own medical salvation; not in fear and trembling, however, but with courage, patience and wisdom. That it can and will do so, I have no doubt. The revival in education—primary, secondary and collegiate—now going on in many southern states is, perhaps, imperfectly understood and appreciated in the north and west. It is a movement of great extent and power, well organized, and intelligently directed towards a definite end. Just at present the bulk of this effort is being expended on the secondary schools. The public secondary schools have been strengthened greatly, and 680 new ones have come into existence in the last three years. During the same time there are few southern colleges of any standing which have not increased their requirements by amounts varying from 25 to 150 per cent. Moreover, the material wealth of the south is increasing so rapidly that it promises soon to become a most prosperous country. The spread of the idea of local taxation guarantees in the near future a system of public schools of definite and permanent importance. So that the day is not so very far off when there will exist the proper basis for high standards in medical education. Already the leaven of high ideals is working in at least three southern universities. And so, I say, do not worry about the south; it will work out its educational development in due time. In the meanwhile the Council can be of much service by stimulating, encouraging, helping—but not by lowering its standard.

Marriages

GEORGE ROGER MYERS, M.D., to Miss Edna, both of Hurlock, Md., April 28.

JESSE L. BEAUCHAMP, M.D., to Miss Clyde Brooks, both of Memphis, Tenn., April 27.

GEORGE ALLEY RENN, M.D., Norfolk, Va., to Miss Sarah E. T. Harris, at Norfolk, April 28.

ORLANDO F. SCOTT, M.D., Argo, Ill., to Miss Alma Elizabethe Ham of Frankfort, Ind., April 7.

JESSE T. LITTLE, M.D., Pittsburg, Pa., to Miss Mary Carskadon, at Keyser, W. Va., April 28.

CLARENCE LAMAR GIDDENS, M.D., Adel, Ga., to Miss Luelle Bray of Valdosta, Ga., April 25.

DANIEL PATTEE RAY, M.D., Johnstown, Pa., to Miss Mary McQouwn of Clearfield, Pa., May 5.

FRANCIS BENEDICT DOYLE, M.D., to Miss Josephine Harper Dillon, both of Brooklyn, N. Y., April 28.

ORVILLE G. BROWN, M.D., U. S. Army, to Miss Clara Amsden Topping, in Sheridan, Wyo., April 21.

MARY J. DUNLAP, M.D., Vineland, N. J., and Clarence Snyder of Racine, Wis., at Trenton, N. J., May 1.

EDWARD BARNEY SMITH, M.D., Woodleigh, N. C., to Miss Alice Saunders Thomas, at Creeds, Va., April 21.

JAMES HALL MASON KNOX, JR., M.D., Baltimore, Md., to Miss Marian Gordon Bowdoin, at Baltimore, April 28.

EARL H. BRUNS, M.D., U. S. Army, to Miss Caroline K. Howard of Stamford, Conn., at Silver City, N. M., April 17.

Deaths

Melchert H. Garten, M.D. Rush Medical College, 1871; one of the most prominent and beloved practitioners of Lincoln, Neb.; died suddenly at his home in that city from angina pectoris, May 6, aged 63. He was born in Springfield, Ind., and graduated from DePauw University before taking up his medical work. For twelve years after his graduation, he practiced in Dover, Ill., and then moved to Lincoln, Neb., where he soon attained a leading position as a specialist in diseases of the eye, ear, nose and throat. He was a member of the American Medical Association, and always an active and earnest member of the state and county societies. He was an ideal husband, father and friend, modest and retiring, unostentatiously liberal in his benefactions, especially in aiding struggling students to obtain an education. He had been in attendance at the annual meeting of the state medical society in Omaha, where he complained of indigestion, which proved to be angina pectoris.

Frederick Bailey Mandeville, M.D. New York Homeopathic Medical College and Hospital, 1863; a member of the medical staff of St. Mary's Hospital, Newark, N. J.; a member of the board of education from 1872 to 1881; a member, twice president and for five years chief health officer of the board of health of Newark; twice president of the New York Homeopathic Medical Society, and twice vice-president of the American Institute of Homeopathy; medical director, vice-president and president of the United States Industrial Insurance Company; assistant surgeon in the Army during the Civil War; died at the home of his son in Newark, April 28, from nephritis, aged 68.

Charles W. Hagen, M.D. Missouri Medical College, St. Louis, 1861; a member of the Medical Society of New Jersey; surgeon of the Fifty-fourth New York Volunteer Infantry, and later medical director of the Army of the Potomac during the Civil War; afterward aqueduct commissioner; coroner of Essex county, N. J., and a member of the board of supervisors; a member of the consulting staff of the German Hospital, Newark; died at his home in that city, April 5, from cerebral hemorrhage, aged 80.

James Presbury DeBruler, M.D. University of Pennsylvania, Philadelphia, 1899; a member of the American Medical Association; who entered the U. S. Navy Jan. 3, 1903; was commissioned passed assistant surgeon Jan. 3, 1906, and had a little more than four years' sea service, and two years' shore or other duty; died at San Juan, Porto Rico, May 7, on board the United States Gunboat *Paducah*, of which he was the medical officer, aged 32.

Phineas Phillips Nichols, M.D. Philadelphia College of Medicine and Surgery, 1856; formerly of Coldwater, Mich.; deputy register of deeds of Branch county, Mich.; from 1860 to 1864; and for the next four years register of deeds; publisher of the *Coldwater Courier* for several years; died at the home of his brother in Valley Forge, Pa., April 15, from cancer of the nose and face, aged 75.

Andrew Homer Scott, M.D. Jefferson Medical College, Philadelphia, 1868; a member of the Arkansas Medical Society; at one time president of the Pulaski County Medical Society; a Confederate veteran; and later physician to the state penitentiary; died at his home in Little Rock, from disease of the hip, due to an accident six months before, aged 68.

William Burgess Wall, M.D. Jefferson Medical College, Philadelphia, 1853; a member of the Medical Society of the State of California; president of the Pacific Coast Soda Company; the Santa Ana Commercial Company; the Santiago Orange Growers' Association, and the Santa Ana Oil Company; died at his home in Santa Ana, April 22, aged 79.

Harvey Williams, M.D. University of Michigan, Ann Arbor, 1871; a member of the American Medical Association, and a pioneer practitioner of Saginaw, Mich.; died at his home, April 22, from cardiac dropsy, aged 63. The Saginaw Medical Society, at a special meeting, held April 23, eulogized the memory of Dr. Williams in suitable resolutions.

Henry Joseph Coyle, M.D. Jefferson Medical College, Philadelphia, 1886; a member of the American Medical Association; and formerly president of the Beaver County Medical Society; a member of the staff of the Beaver Valley General Hospital; died at his home in New Brighton, Pa., January 16, aged 44.

James Clark Watson, M.D. Medical College of Virginia, Richmond, 1885; of Richmond, Va.; assistant surgeon in the Confederate Service during the Civil War; and in 1884 appointed surgeon to the Virginia Penitentiary; died in the Virginia Hospital, Richmond, April 30, aged 78.

Charles James McNamara, M.D. University of Toronto, 1889; of Barlow, N. D.; a member of the American Medical Association; for ten years a member of the Northwest Mounted Police; died at St. Mary's Hospital, Superior, Wis., from uremia, April 28, aged 43.

Solomon Jacob Best (license, Ill., years of practice, 1877); a practitioner of Freeport, Ill., for more than fifty years; said to have been the oldest member of the Stephenson County Medical Society; died suddenly from angina pectoris, at his home, April 26, aged 71.

Lemuel Cross, M.D. Albany (N. Y.) Medical College, 1856; for several terms a member of the board of education and board of U. S. pension examining surgeons of Cobleskill, N. Y.; died at his home in that place, April 26, from disease of the liver, aged 75.

Benjamin Ellsworth DuVall, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1900; Chicago College of Medicine and Surgery, 1904; of Dixon, Ill.; died in the Lee County Hospital in that city, April 15, after an operation on the kidney, aged 41.

E. D. Frank, M.D. Louisville (Ky.) Medical College, 1894; of Prestonsburg, Ky.; was found dead in a cemetery near Lexington, May 1, from the effects of a gunshot wound of the head, supposed to have been self-inflicted with suicidal intent, aged 45.

John Duboise North, M.D. University of Michigan, Ann Arbor, 1859; local surgeon for the Jackson, Lansing and Saginaw and Michigan Central railroads for many years; died at his home in Jackson, April 30, from tumor of the esophagus, aged 75.

Henry Marshall Pinkard, M.D. Jefferson Medical College, Philadelphia, 1855; of Washington, D. C.; surgeon in the Confederate Service during the Civil War; died in the George Washington University Hospital, April 28, from nephritis, aged 71.

Burr L. Houghton, M.D. New York Homeopathic Medical College and Hospital, New York City, 1881; New York University, New York City, 1891; died suddenly at his home in Brooklyn, N. Y., May 1, from cerebral hemorrhage, aged 54.

Michael Riley Powers, M.D. Louisville Medical College, 1902; of Jeffersonville, Pa.; a noted professional baseball player; died at the Northwestern General Hospital, Philadelphia, from peritonitis, following an injury to the intestines, aged 38.

Norman Pitt Smith, M.D. Hahnemann Medical College, Chicago, 1881; a member of the American Medical Association, and of the International Association of Railway Surgeons; died suddenly at his home in Paris, Ill., April 29, aged 62.

William Ward, M.D. Georgetown University, Washington, D. C., 1871; a member of the Medical Association of the District of Columbia; a Confederate veteran; died at his home in Washington, April 19, from cerebral hemorrhage, aged 69.

Mark De Les Dernier Sheldon, M.D. Western Reserve University, Cleveland, 1850; for many years a practitioner of Story county, Iowa; died at the home of his daughter in St. Paul, Minn., April 11, from senile debility, aged 92.

Levin J. Woolen, M.D. University of Louisville, Ky., 1857; of Vevay, Ind.; state senator from Ohio, Ripley and Switzerland counties in 1878; for two terms auditor of Switzerland county; died at his home, April 20, aged 73.

David H. Miller, M.D. Medical College of Ohio, Cincinnati, 1867; a veteran of the Civil War; for three years a member of the school board of Franklin, Ind.; died at his home in that city, from nephritis, April 22, aged 66.

James J. Foster, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1903; a member of the American Medical Association; died at his home in Milwaukee, April 30, from disease of the liver, aged 40.

Horatio Gomez, M.D. College of Physicians and Surgeons, New York City, 1849; a charter member of the Medical Association of the Greater City of New York; died at his home in New York City, April 22, aged 82.

John Henry Norstrom, M.D. University of Pennsylvania, Philadelphia, 1893; a member of the American Medical Association; for many years a practitioner of Boone, Iowa; died in Austin, Texas, April 27, aged 57.

Chester M. Clark, M.D. Berkshire Medical College, Pittsfield, Mass., 1849; for several years clerk of the village board and a member of the school board of Galva, Ill.; died at his home in that city, April 25, aged 82.

John C. O'Dwyer, M.D. College of Physicians and Surgeons, Baltimore, 1900; died at the home of his mother in Ansonia, Conn., April 13, from valvular heart disease, following inflammatory rheumatism, aged 31.

Thomas William Radford, M.D. University of Louisville, Ky., 1851; three times treasurer of Jackson county, Mo.; died at the home of his daughter in Kansas City, April 10, from senile debility, aged 80.

Enos Greenamyer, M.D. Eclectic Medical Institute, Cincinnati, 1864; for many years a practitioner of Columbiana, Ohio; died at the home of his daughter in Lisbon, Ohio, May 1, from influenza, aged 77.

George Mills Boyd, M.D. Western University, London, Ont., 1905; a member of the Medical Society of the State of Pennsylvania; died suddenly from embolism, April 28, at his home in Philadelphia, aged 30.

Joseph W. Bates, M.D. Medical College of Ohio, Cincinnati, 1883; a member of the Indiana State Medical Association; died at his home in Broad Ripple, Indianapolis, May 3, from pneumonia, aged 51.

Ebenezer Everett Fisher, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1869; of Old Mission, Mich.; died at the home of his daughter, in Traverse City, Mich., April 27, aged 66.

Joseph H. Plunkett, M.D. Tulane University, New Orleans, 1890; a member of the Mississippi State Medical Association; died at his home in McComb City, April 29, from nephritis, aged 46.

Arthur Pearl Crafts, M.D. Long Island College Hospital, Brooklyn, N. Y., 1890; formerly of Cleveland, Ohio; died in the Michigan Asylum for the Insane, Kalamazoo, April 25, aged 42.

William L. Challiss, M.D. Jefferson Medical College, Philadelphia, 1849; of Atchison, Kan.; died at the home of his daughter in Toledo, Ohio, April 23, from senile debility, aged 84.

James Warren Freeman, M.D. Albany (N. Y.) Medical College, 1864; for many years a member of the Michigan State Medical Society; died at his home in East Saginaw, May 3, from inflammatory rheumatism, aged 80.

William L. Clagett, M.D. Medical College of Ohio, Cincinnati, 1874; a member of the Medical Society of the State of Pennsylvania; died at his home in Rummerfield, April 21, aged 88.

A. C. Vories (license, Ky., years of practice, 1894); postmaster of Boaz, Ky., for many years; and for 54 years a practitioner; died at his home May 1, from senile debility, aged 81.

Daniel S. Skinner, M.D. Detroit College of Medicine, 1899; of Saline, Mich.; died at the home of his parents in St. Mary's, Ont., from valvular heart disease, April 19, aged 51.

John A. McCreary, M.D. Tulane University, New Orleans, 1860; a member of the Medical Association of the State of Alabama; died at his home in Evergreen, April 26, aged 75.

James S. Curry, M.D. Medical College of Virginia, Richmond, 1867; of Petersburg, Va.; a Confederate veteran; died at the home of his daughter in Franklin, W. Va., April 28, aged 72.

Harry Clay McCormick, M.D. Philadelphia University of Medicine and Surgery, 1871; died at his home in Pen Argyl, Pa., March 9, from chronic interstitial nephritis, aged 65.

Willard E. Berkaw, M.D. University of Pennsylvania, Philadelphia, 1881; of Annandale, N. J.; for a time physician of Hunterdon county; died suddenly from heart disease, in the Annandale Hotel, April 29, aged 52.

William H. Griffiths, M.D. New York Homeopathic Medical College and Hospital, New York City, 1874; of Munnsville, N. Y.; died in Rome, N. Y., April 20, aged 54.

John E. Wesley (license, Utah, 1894); for more than half a century a practitioner of Salt Lake City; died at his home, April 25, from cerebral hemorrhage, aged 82.

John Blevins, M.D. American Medical College, Eclectic, St. Louis, 1881; a veteran of the Civil War; died at his home in Cove, Ore., April 19, from heart disease, aged 65.

William W. Payne, M.D. Southern Medical College, Atlanta, Ga., 1882; died at his home in Meridian, Miss., April 16, from pernicious anemia, aged 49.

Louis Edward Taubel, M.D. University of Pennsylvania, Philadelphia, 1885; died at his home in Philadelphia, April 26, from typhoid fever.

Ben McD. Trabue, M.D. Transylvania University, Lexington, Ky., 1848; died at his home in Allensville, Ky., April 15, from senile debility, aged 81.

Henry Benjamin Cragin, Jr., M.D. Rush Medical College, Chicago, 1901; of Chicago; died in a hospital in that city May 27, 1908, from cerebral meningitis, aged 33.

William Purdy, M.D. University of Louisville, Ky., 1884; a member of the Illinois State Medical Society; died at his home in Lawrenceville, April 15, aged 50.

William Wilson Coker, M.D. College of Physicians and Surgeons, Chicago, 1888; L.R.C.P., Ireland, 1872; died at his home in Chicago, May 1, from cerebral hemorrhage, aged 69.

Thomas Jefferson Denny, M.D. Cincinnati College of Medicine and Surgery, 1872; died at his home in LaFollette, Tenn., Oct. 10, 1908, from nephritis, aged 63.

Alvarado Middleditch, M.D. Albany (N. Y.) Medical College, 1856; a pioneer physician of Waterloo, Iowa; died at his home in Pasadena, Cal., April 26, aged 80.

Roloff Johnson, M.D. Northwestern Medical College, St. Joseph, Mo., 1888; died at his home in Normal, Ill., May 1, from disease of the stomach, aged 59.

Harrison A. Nichols, M.D. University of Michigan, Ann Arbor, 1868; died at his home in Plymouth, Mich., April 30, from cerebral hemorrhage, aged 63.

John Portuous Morison, M.D. University of Michigan, Ann Arbor, 1868; died at his home in Chicago, from cirrhosis of the liver, May 1, aged 66.

James G. Nellis, M.D. Hahnemann Medical College of the Pacific, San Francisco, 1888; died at his home in Irvington, Cal., April 23.

Martin S. Dowling, M.D. Eclectic Medical Institute, Cincinnati, 1873; died at his home in Leslie, Mich., April 27, aged 71.

Robert S. Albright, M.D. Rush Medical College, Chicago, 1884; died at his home in Beatrice, Neb., April 19.

Albert T. Carpenter, M.D. Detroit Medical College, 1891; died in Chicago, May 5, from paresis, aged 38.

Arthur Gamgee, M.D. Edinburgh; emeritus professor of physiology in Owen's College, Manchester; who won renown by his original research work in physiology and physiologic chemistry, and especially regarding the chemical and physical properties of hemoglobin, which were the subject of the Croonian Lectures delivered by him before the Royal Society in 1902; whose last work was inquiry undertaken for the Carnegie Institute on the "Present State of Knowledge of the Physiology of Nutrition;" a life devotee of science and an enthusiastic lover of scientific work; died in Paris, March 29, from pneumonia, following influenza, aged 67.

Manuel Amador, M.D. a native of Carthagena, Columbia; president of the State of Panama in 1869; one of the prime movers in the revolution against the United States of Colombia in 1903, which led to the independence of Panama, and first president of that republic; died in Panama, May 2, aged 75.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocona, Pa., May 31-June 1.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 3-5.
American Urological Association, Atlantic City, June 7.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
Missouri State Medical Association, Jefferson City, May 18-20.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Jersey Medical Society, Cape May, June 23-25.
Rhode Island Medical Society, Providence, June 1.
Wisconsin State Medical Society, Madison, June 30-July 2.

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

(Continued from page 1533)

Surgical Treatment of Complete Prolapse of the Uterus

DR. J. CRISLER, Jackson, described briefly the causes of uterine prolapse and methods for its prevention. He had operated on three cases of complete prolapse, doing vaginal hysterectomy. He stitched the broad ligaments to the under surface of the bladder and to the cuff of the vagina and finally stitched the vaginal cuff transversely. The bladder and inner extremity of the vagina were thus swung high by retraction of the ligaments. Any perineal laceration was then repaired. The operation was easy on the patient, though tedious for the operator, and recovery was usually complete in two weeks.

Indigestion from a Surgical Standpoint

DR. J. DARRINGTON, Yazoo City, discussed the surgical conditions which present those symptoms that combine to show the picture called indigestion by many physicians. He advocated early exploratory operation to determine and correct the cause. Too many of these patients were treated with medicine when surgery offered the only hope of cure.

DISCUSSION

DR. BARKSDALE, Vaiden: There is no doubt that many of the ills that we attribute to little errors of secretion are due to some distinct lesion of the stomach which could and should be relieved by surgical measures, which if promptly taken can be carried through with very little danger. I should like to emphasize the importance of bringing to our aid in diagnosis early in these troubles the skill of the trained pathologist, in order that we may discover at once what the causing lesion may be.

DR. H. L. SUTHERLAND, Rosedale: Last fall a male patient was sent to me who had been having small hemorrhages from the stomach. He was sent to the hospital and had a considerable hemorrhage on the afternoon he reached there. That night he had a very violent hemorrhage and my partner was called to see him and notwithstanding that we used all the salt solution we could, the man died from the hemorrhage. Postmortem examination of the stomach showed that the lining of the stomach was normal, and evidently we had not reached the point at which the ulcer was located. The intestines could not be examined.

DR. JOHN DARRINGTON: It would have been of interest to have gone into the different diseases of the stomach and bowels, the gall bladder and ducts, and the causes of hemorrhage. I had a case not long ago of continued hemorrhage, and on operation found cirrhosis of the liver with no evidence of ulcer of the stomach. It is the family doctor who is called into these cases because the patients can not digest food, have some acne eruptions, etc. The physician does not wait for hemorrhage to diagnose rupture of the bowels any more than he would wait for jaundice to diagnose gallstones, so he should not wait for hemorrhage to diagnose ulcer of the stomach.

The Importance of Surgical Diagnosis

DR. A. G. PAYNE, Greenville, made an appeal for greater care and exactness in making diagnoses. The tendency for the surgeon and the internist to look at a case only from his own point of view had become too great. Each would do better work in proportion to the breadth and exactness of his knowledge and his ability to view a case from both sides. He cited several illustrative cases.

DISCUSSION

DR. R. WISS, Meriden: A woman was sent to me about four years ago who had been told that she had serious ovarian trouble and must have both ovaries removed. She was desirous of having a child; she had had one child, and had been ill for some years. I found an ulceration, and finally, after a test meal, I located the trouble in the stomach, and by washing the stomach she was restored

to health. Later an operation was done for the ulcer. One year later I delivered her of a twelve-pound boy. The boy is now 3 years old, and both she and the child have remained perfectly well all the time.

DR. CRISLER, Jackson: Unfortunately it has been the habit of physicians to accept as a matter of course the symptoms that patients relate, and to this degree to allow the patient to diagnose his own condition. Of course at an autopsy we find that he was wrong, but then it is too late. Sometimes he is right, but that doesn't relieve us of the responsibility. I do not think the necessity for thorough abdominal and subpelvic examinations can be emphasized too strongly. In addition to a thorough examination we ought to enquire carefully if the patient has noticed any enlargements. It happened to be my misfortune some time ago for a woman to come to me with typical gall-bladder symptoms, and instead of going over her carefully as I should have done, I simply took her statements and drained the gall bladder and thought I had cured her. She gained very rapidly, and apparently got well. Three or four months later she returned complaining again and I found she had cervical cancer. It would have been easy at first to remove the gall bladder and avoid a second operation, and she now refuses to go under an anesthetic a second time. In appendicitis work we are misled more often than anywhere else.

DR. H. L. SUTHERLAND, Rosedale: I wish to refer to a book or paper written in the '70's by Hilton of London, called "Rest and Pain," and although a long time has intervened, that book is becoming more and more a classic. It shows how often we can be deceived by pains remote from the real lesion. In 1903, in New Orleans, Herrick of Chicago, read a paper on "Abdominal Pain in Pleurisy and Pneumonia." I think that is one of the best books I have in my library. It relates a good many cases in which lung trouble caused the pain. We all know that pains from the chest and lesions of the lungs are often referred to the abdomen in children. Herrick cites cases of patients sent into the surgical ward for treatment in which trouble with the lungs was the cause of the pain, and they were sent back to the medical wards again. About a year after I heard that paper read a young surgeon called on me and said he would like to have my assistance in a case of gall-bladder operation. I examined the patient at his request, and while the man may have had gall-bladder trouble, I do know that he did have pneumonia. I suggested that the surgeon treat the pneumonia first and the gall bladder later. The patient died of pneumonia, and the surgeon agreed with me afterward that the gravest trouble at that time was the pneumonia.

DR. CARNES, Kosciusko: One cause which I frequently see, and which I believe is often overlooked, is nasal obstruction. This occurs frequently in any child and we should be on the lookout for it. The child passes through the day comfortably, but when it lies down at night it has night terrors, which are frequently ascribed to indigestion or worms. By passing the index finger along the palate the diagnosis is easily made.

DR. BARKSDALE, Vaiden: Some years ago I had printed a form of examination blank which is even fuller than that used by the life-insurance companies. In this I take the complete family history, so far as obtainable, and then take up each symptom in detail, noting every departure from the normal. If a man will do this he will find that he can keep up better with his own work, and come nearer making diagnoses in a number of cases than if he goes at it in a haphazard way. I recently had a case of a young man with tuberculous history in whom I had reason to suspect tuberculosis, and I found from prompt reaction to the Moro test that my suspicions were correct.

Intestinal Obstruction or Ileus: A Plea for Earlier Diagnosis and Less Radical Surgical Intervention in Late Cases

DR. D. P. STREET, Vicksburg, described the various kinds of obstruction and the symptoms accompanying each. The mortality in these cases is far too high on account of delay in operating. He described the methods of treating the different kinds of obstruction medically and surgically.

Hernia; the Abuse of the Truss

DR. S. W. JOHNSTON, Vicksburg, considered the dangers of descent and strangulation of the gut in cases of hernia protected and treated only by the application of the truss. He cited four such cases that had recently come under his observation in which strangulation had occurred and advocated early radical operation as the best means of providing comfort and protection for the patient.

Uterine Fibromyomata

DR. J. W. BARKSDALE, Vaiden, urged the immediate removal of all uterine fibroids as soon as diagnosed, quoting from Eastman, Cullen, Giles and others to emphasize his opinion that the comparatively small danger of early removal is not to be considered when contrasted with the distress, discomfort and danger that follow delay.

DISCUSSION

DR. J. D. DONALD, Hattiesburg: This subject of fibroids in the uterus is one of the utmost importance and gravity. One part of the paper that impressed me was the idea of not risking an early operation in the case of fibroids, because if there is any chance to preserve the female generative organs during the child-bearing period, it is greatly to be desired. I remember a case of labor in which this danger was very forcibly impressed on my mind. It was impossible to deliver the child without resorting to Cesarean section as the uterus was found to be surrounded by fibroid tumors. It was necessary to do a Cesarean section, and the patient died. It would have been so much more important if that woman's condition could have been recognized before this pregnancy and the uterus sacrificed while there was still opportunity to save that poor woman's life. I don't know that these tumors had ever elicited any complaint from the patient, because she was a woman who never made known her troubles, had never been examined, and consequently no one had any idea that the condition existed.

DR. S. W. JOHNSTON: We often find a sarcomatous degeneration of these fibroids, not suspected at the time of operation. I have seen several removed simply because of the pressure they exerted which interfered with urination or defecation, and have found this condition in many cases in which it was not suspected.

DR. J. W. BARKSDALE: A great many women will not have these operations performed because they desire children. With reference to sarcomatous degeneration, it has been the practice at the Johns Hopkins Hospital for years to subject these immediately to a microscopic examination. It is on account of these degenerations which are so often found that I make this plea for the removal of the fibroids. No man would think of allowing appendicitis to run on until forced to operate—then why allow these symptomless fibroids to go on until they reach the stage where operation results fatally to the patient? I don't care how small or how large the fibroid is, so long as it can be felt, some sort of operation should be resorted to. I consider that every case is an operative case, pure and simple, and hence operation should be done as soon as the diagnosis is made.

Treatment of Gonorrhea in Women

DR. G. R. LIVERMORE, Memphis, Tenn., described the treatment of urethritis, inflammations of the vulva and Bartholin's glands, vaginitis, and endometritis of gonorrheal origin. His experience with the vaccine treatment has not been satisfactory.

SYMPOSIUM ON TUBERCULOSIS

The Campaign Against Tuberculosis, or the Conflict Between Applied Science and the Tubercle Bacillus

DR. T. M. JONES, Hernando, considered the statistics of tuberculosis, reviewed the conditions under which the disease develops and described briefly the methods necessary for its prevention. It was a matter for public education, and though we failed again and again in persuading people to live properly, our war-cry should be, "Lay on, MacDuff!"

Tuberculosis

H. C. BUCK, Friars Point, traced the ancient history of the disease and contrasted our present with our former knowledge. He believed it inadvisable to send patients to the ordinary resorts on account of the dangers of infection from others. Isolation was the better plan and offered better chances of a cure.

Treatment of Tuberculosis

DR. H. CHRISTMAS, Tchula, touched on the subject of resorts for consumptives. Since the country was first settled, numbers of places had been advocated as being free from tuberculosis. These generally were free from inhabitants also, and their exploitation as health resorts was generally followed by a boom in cemetery lots. While it was universally accepted that drugs were worse than useless in tuberculosis, there were many indications for medication to promote the comfort of the patient, and there were many conditions that occurred in the course of the disease that must not be neglected.

Discussion on Tuberculosis

DR. F. J. MAYER, New Orleans: The subject of tuberculosis is so broad and has so many different phases that we can only take up a few at a time. The phase I have in mind now is the relation of beef and milk to tuberculosis. When we remember that from 5 to 50 per cent. of the cows of Mississippi are tuberculous, and that from 2 to 4 per cent. have a tuberculous lesion of the lacteal duct, and that therefore the bacilli enter directly into the milk stream, we must awaken to a realizing sense of the danger in which we stand. When there is a generalized tuberculosis there may also be a danger from the fact that the bacilli are found in the other secretions that enter indirectly into the milk, just as there is danger from milking an absolutely healthy cow in a tuberculous environment. When it comes to beef, I can only reiterate what I said before the legislature of Texas, that most of the beef of Mississippi and Texas is not fit to go into a stomach. I made the statement there that while Texas had the largest herds of any state in the Union, yet Texans ate the cribs and culls that were refused by the Federal inspectors for interstate shipment. It may be that some of these cows come to Texas and Mississippi. I know that they do to Louisiana. That statement was in a measure challenged as being so grave and serious that an authority was demanded. I gave as authority the state health officer of Texas, who, in a signed statement next day, said that in his investigations he had found conditions infinitely worse than I had painted them, but owing to the penuriousness of the legislature he was unable to prosecute his inquiries in the interest of the public health. As a delegate to the Tuberculosis Congress from the State Board of Health of Louisiana, I felt it my duty, in view of the lawsuit pending against the state health officer, to attend the section on animal diseases, and on my return I made a report which has never been published.

DR. R. M. SADLER, Okolona, presented a report of his observations at the International Tuberculosis Congress.

DR. CULLY, Jackson: In the treatment of any disease a correct and early diagnosis is of the gravest importance, and this responsibility rests largely on the general practitioner. I believe it is estimated that 80 per cent. of patients with tuberculosis will recover if treated in the primary stage. There are many things that the general practitioner can do. The education of the public is largely in his hands, and if he does not educate his clientele in the importance of measures to be taken against the ravages of this disease, we can hope to make no progress in the fight. One of the greatest menaces to the welfare of the human family is the negro servants and nurses in our homes. A large percentage of negroes are tuberculous. It is the duty of the physician that he ask his families to notify him when there is any suspicion of this disease among the servants, then he can report these cases and isolate them so far as the law will allow him to do so. I believe we are all too lax in our endeavors to prevent the spread of the disease through food, fruit, meat, milk, etc., and from the fact that we have not enforced those laws that would protect our fruits, beef, milk, etc., from infection by flies. I know how the fruits are kept on the streets, and that meat is hauled through streets from slaughter pens to shops, unprotected from dust, and after it gets to shops, it hangs there without protection of screens. Fruits are exposed on the streets where the insects can get at them and the dust lie on them, and thereby carry infection.

DR. H. M. FOLKES, Biloxi: The weak point in the campaign against tuberculosis is the failure to make prompt diagnoses. The gentlemen who conduct tuberculosis sanitariums have testified that 68 per cent. of the patients coming to these institutions for treatment have never had any really thorough examination of the chest. Talk about educating the public to eradicate tuberculosis, when the doctors themselves don't make the diagnoses, or else fail to tell the patient what is the matter with him! If the physician fails to tell a patient for fear of scaring him to death, and then outlines a course of treatment, the patient doesn't know what to think. I think that tuberculosis should be designated as the "great spit plague" rather than the "great white plague." It seems to me that the proper place to touch public measures, and to talk against consumption, is in the advanced grades of the public schools.

DR. R. WISS, Meridian: An interesting case came under my observation a few years ago. I had been making an analysis of urine for another physician. He brought me a specimen and told me he didn't know what was the matter with the patient except that he had a pain in his back and had lost fifteen pounds. I found nothing the matter with the urine, and thought he was playing a joke on me. I began making various tests and finally got a reaction for indican, which I found might mean cancer or tuberculosis. I tested for tuberculosis and got quantities of bacilli. I then discovered that the man's sister had just died of tuberculosis a few months before. The man was promptly put on treatment for tuberculosis, gained flesh rapidly, and recovered.

DR. A. G. PAYNE, Greenville: Will the Moro test give a reaction in a healthy individual or from any other disease than tuberculosis? I recently had a case in which the Moro test gave a positive reaction, which frightened the patient a great deal, so I tried it on absolutely healthy patients and got just as prompt reactions from those.

DR. J. W. BARKSDALE, Vaiden: I have used the Moro test in several cases in which it was negative. While my experience has hardly been sufficient to justify conclusions, yet I regard this test as being as reliable as any we have. In other cases in which symptoms indicated tuberculosis I have never failed to get a positive reaction.

DR. H. CHRISTMAS, Tchula: I hope the members of the association do not think that I favor giving much medicine in tuberculosis. I value fresh air and exercise, but I think there are always other symptoms that go with all diseases. A person who is too weak to go out and get the open air would need some other treatment. I believe as strongly as any one in the value of open-air treatment, but there are other things needed in conjunction with it. There are certain conditions accompanying every disease which every practitioner of medicine is bound to acknowledge should receive attention. I do not believe in people going away from home; I favor their staying at home and treating themselves at home.

DR. P. R. BROWN, West Point: As a profession I suppose we are pretty well a unit when it comes to the management of tuberculosis. I agree with Dr. Folkes that it is a disease in which medicine has really no place as a therapeutic agency. Of course we have to treat the symptoms sometimes and stimulate the appetite. Not much stress has been placed on the rest, however, and this I consider one of the most important factors, especially when there is elevation of temperature. I have been treating these patients with some success, and the main things I use are a good thermometer and a good pair of scales. I take the temperature once or twice a day and

weigh the patient once or twice a week. I give no medicine except a little nux vomica or hydrochloric acid after meals. I advise raw eggs and an abundance of sweet milk, and do not allow the patient even to sit up when the temperature is up half a degree. I keep them in a tent or select a room with southern exposure, and give them plenty of fresh pure air day and night, and see that they get at least eight hours sleep at night, and about an hour at noon. In tuberculosis there is no danger of infection until the tubercles begin to break down or the patient begins to expectorate. Unless there is a decided predisposition to the disease, I think the danger is almost nothing in cases of occasional exposure.

Nervous Reflexes and Complications Due to Pregnancy

DR. I. H. C. COOK, Hattiesburg, considered the nervous reflexes of pregnancy, particularly that of nausea, which he considered due to an anemia of the sympathtic ganglia. He outlined the customary treatment for such a condition.

DISCUSSION

DR. GRAY, Clarksdale: Vomiting and nausea during pregnancy have always been bugbears to the profession. For the past five years I have been using about one quarter of a pint of salt solution, three times a day, and absolutely nothing else; it has been more satisfactory than any other remedy I have used.

DR. E. H. MARTIN, Hot Springs, Ark.: Ten years ago, I was called in consultation in such a case. The patient was suffering greatly with nausea, which nothing seemed to alleviate. The physician in the case, who knew that I had been dabbling in hypnotism, suggested that I try it on this woman, which was done; the woman was relieved and the child saved. However, although I have never seen a case that I could not control by suggestion, I would not advise physicians to try this method, as they do not always receive any thanks for their trouble. Some months after I had relieved this patient by suggestion, I saw her enter an office, just across the street. The doctor was not in, and after waiting some time, the woman came to my office and said that she was in great pain, and asked if I could not give her something to relieve her. I said that I could give her immediate relief by suggestion, but she said that she could not allow it, as her husband had made her promise never again to permit any man to hypnotize her.

A Comparison of the Physiologic Action and Therapeutics of Some Cardiac Stimulants

DR. J. T. LONGINO, Jonestown, considered the physiologic action and therapeutic uses of strychnin, nitroglycerin and digitalis.

DISCUSSION

DR. M. ALEXANDER, Tunica: Digitalis, especially in the first stages of the disease, is almost a specific in pneumonia. The effect of digitalis is to lengthen the intervals and send the blood with increased force through the lungs. There are, of course, some objections to digitalis, but the objections are not nearly so numerous as physicians have been taught. When there is a lack of compensation digitalis is certainly needed.

DR. H. CHRISTMAS, Tchula: I regard digitalis as a very valuable remedy in pneumonia. When the heart needs stimulating and there is a lack of compensation, digitalis should be given.

DR. ROSA WISS, Meridian: I am sorry that Dr. Longino deprecated the use of nitroglycerin, as I have always obtained good results from its use, and I think that the failure to get the proper results is due to the fact that enough is not given. I do not believe much in medicine, but I do believe that if it is to be given at all, enough should be given to do some good.

DR. J. T. LONGINO: I wish to emphasize only one point, and that is, that in the administration of cardiac stimulants, the physician must let the condition of the blood vessels be his guide. In pneumonia there is apt to be a weak, collapsed heart, and nitroglycerin will be depressing and in such case I certainly advise against its use.

Water

DR. S. E. FRIERSON, Lyon, described the uses of water in the human economy and the various conditions in illness in which its use, external and internal, is indicated.

DISCUSSION

DR. E. H. MARTIN, Hot Springs, Ark.: No one drinks or uses as much water as he should. If people did there would be one-half as much sickness as there is. In a case of terrific mania, the patient was controlled and finally cured by being kept in a continuous bath for eight hours.

DR. W. D. HUBBARD, West Point: Sometimes it is not desirable to drink too much water. In cases of digestive disturbances water is bad, especially in dilated stomach. In advising a patient to drink mineral water, the physician should be certain that the properties contained in the water are what the individual needs for the particular trouble. My experience with iron water is that it is not good for persons suffering with digestive disturbances, but is good for kidney disturbances. I thoroughly appreciate the value of drinking good pure water, but think it unwise to advise anyone, regardless of their particular case, to dring as much water as possible.

The Uses and Abuses of Medicine

DR. W. W. REYNOLDS, Meridian, contended for less medication. Placebos had a definite place in practice and not infrequently were absolutely necessary.

Peculiar Effects of Some Drugs

DR. L. L. MINOR, Hollywood, discussed the peculiar effects of some of our commoner remedies and related several instances of idiosyncrasy.

DISCUSSION

DR. E. J. JOHNSON, Yazoo City: A drug which I have used successfully in kidney disease is spartein. To get good results from the use of this drug, it should be given in large doses; I give from one-half to two grains at a dose.

DR. J. H. HARRISON, Tillatoba: I give in large doses, with very good results. Most physicians err in giving too much medicine, and usually give it simply because the patient or the family expects it. When a medicine is needed, it should be given fearlessly.

Conclusions Based on Experience with Veratrum

DR. G. S. BRYAN, Amory, has found veratrum exceedingly useful. It is not a dangerous drug when properly used; in fact, is freer from danger than almost any other potent drug. If the specimen is fresh and free from impurities it is reliable. It has been used in doses entirely too small to give results; full doses have different effect from small ones. It is indicated in localized inflammations and active congestions and in all sthenic fevers. Veratrum provides for its own elimination and render safe the administration of drugs that would otherwise be dangerous.

DISCUSSION

DR. C. F. CARNES, Kosciusko: I have used veratrum, with great success, in puerperal eclampsia, and never failed to give less than 10 minims.

DR. JONES: What is the dose in puerperal convulsions?

DR. WALTER H. ROWAN, Wiggins: I am of the opinion that the dose of veratrum in puerperal eclampsia is almost unlimited. I had a patient with eclampsia to whom I gave 30 drops every thirty minutes, until I had given 6 doses, making 180 minims at the end of 3 hours. I believe that treatment saved her life. I have seen, however, some bad results from the use of veratrum in pneumonia, but in puerperal eclampsia I always gave it and in large doses.

DR. M. ALEXANDER, Tunica: I consider veratrum as nearly a specific in puerperal eclampsia as any drug we have; I have never lost a case of eclampsia since I began using it. My dose is 20 drops, and in 30 minutes 10 or 15 drops, to be kept up until 2, 3 or 4 doses are given; and I have always been able to stop the convulsions. Veratrum, however, is a drug that should never be given unless the physician remains with the patient to note the effect.

DR. FRANK JONES, Memphis, Tenn.: I have never had any use for veratrum for anything or on any occasion. I think that the uterus should be emptied and the toxic condition would be relieved.

DR. T. H. HOLLOMAN, Ittabena: When veratrum is given, the physician should remain with the patient to watch the effect of the drug. In one case of puerperal eclampsia I gave veratrum, chloroform and morphin, and at the termination of the case was hard to say which drug had stopped the convulsions.

DR. PHILIPS: I agree with Dr. Bryan in regard to the use of veratrum in eclampsia. I have had many cases of puerperal eclampsia which came on after the uterus was empty; and I have never lost a case since I have been using veratrum. It must be used not for the dose, but for the effect. However, I can not agree that there is no danger in it, as I have had a personal experience with it, which proved that it is possible to take too much. I was suffering with a bad cough, and put up a cough mixture, veratrum being one of the ingredients. I kept the bottle in my pocket, and at intervals during the day took a sip. Just as I reached home I fell. When another physician arrived I could not speak, but motioned for a pencil, and when it was handed to me, wrote the word "veratrum." After repeated doses of whiskey I could speak.

DR. G. H. MCNEIL, Newton: Veratrum is the remedy for puerperal eclampsia. In two cases in which I was called hurriedly, and not knowing the nature of the trouble, I failed to take veratrum with me, so resorted to morphin and other remedies, but I could not control the convulsions. I then procured veratrum and used it with happy results. I give 30 drops, in 30 minutes giving 10 drops more. I have never used veratrum in pneumonia, and am afraid of it, but should I use it I would be certain to do so only in the early stages of the disease, and would watch it very carefully.

DR. YOUNG: When I was a young man I had a case of pneumonia, and the family becoming uneasy on account of my youth, asked me to call in the old doctor of the town. I did so, and the doctor was indignant because I used veratrum, but before the evening was over he consented to the use of the drug and the patient was much benefited. Nothing will take the place of veratrum in puerperal eclampsia.

DR. G. S. BRYAN: I do not know the maximum dose of veratrum in eclampsia. A physician should begin with a small dose and give it till he gets the effect. When used properly, the results will be good. I take it for granted that the doctor who gives veratrum knows how to give it, knows the dose to give, and knows what he is combating. I do not give it in every case of pneumonia, but when I think it is needed I give it and give it for effect.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held April 28, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

SYMPOSIUM ON CANCER

Cancer Mortalities

DR. JOHN A. MCGLINN: In the decade from 1890 to 1900 cancer showed an increase of 12 per 100,000 population. Statistics show that cancer has increased in the United States from 53 per 100,000 population in 1890 to 70.8 in 1906. Statistics also show increases for all countries. From 1901 to 1906 increases were shown in cancer of stomach and liver 1.8 per cent.; mouth, 0.4 per cent.; intestines, 0.6 per cent.; skin, 0.1 per cent., and decrease in female genitalia 0.4 per cent.; breast, 0.1 per cent., and other unspecified organs 2.4 per cent. In England one out of 11 and one woman out of 8 over 35 years of age die of cancer. In the same country more women at all ages die of cancer than of phthisis. In the registration area of the United States for all ages one man out of 32 and one woman out of 11 die of cancer. After the age of 35 one man out of 17 and one woman out of 9 die of cancer. During this period more women die in the United States of cancer than phthisis. The age of greatest frequency is between 50 and 54, when one man in 14, and one woman in 5 die of cancer. If cancer had been cured in 1906 it would have shown a saving of life of 373,574 years, or a total saving of earning capacity of $224,144,400. Out of the total population of the registration area of males and females over 35 years of age in 1906 there have died, or will die of cancer 281,909 men and 518,185 women. The combined death rate for all surgical conditions, exclusive of cancer, in 1906 was 161.5. Cancer death rate was 70.8, so that practically one-third of deaths from all surgical conditions were due to cancer. The combined death rate from all preventable diseases was but 6.4 higher than cancer. Cancer of the stomach in males occurs in 43.06 per cent. of all cases and in females in 24.47 per cent. Cancer of the uterus occurs in 27.68 per cent. of all women. Eliminating the organs peculiar to the sexes, cancer is more frequent in men than in women. The most frequent time of occurrence in males is between 50 and 75 years and in females between 45 and 70 years. The greatest factor in the consideration of age, influence of the conjugal state, occupation, race and location of the disease is the average age of the people in certain states of social life and occupation and the question of maturity in reference to various races.

Some Conditions in the Growth of Tumors

DR. LEO LOEB: The questions confronting us in the investigation of the growth of tumors are: (1) Under what conditions does a tissue assume an increased energy of growth? Cancer in the respect of growth energy differs from the energy of growth that is manifest in the healing of wounds, in that in the former the gain in energy is transmitted from generation to generation indefinitely. (2) Under what conditions does hereditary transmission of an acquired increase of growth energy to the succeeding cell generations take place? (3) Why do we find an infiltrating growth in cancer. A single factor, such as separation of a piece of tissue from its normal surroundings, is insufficient in itself to produce a tumor. The effect of external agencies in the production of tumors is best studied in certain tumors on the external surface of the body, e. g., cancer produced by arsenic or by long-continued exposure to the Roentgen rays, or possibly by light (xeroderma pigmentosum). These agencies probably act by direct stimulating action on the epithelial cells. External stimuli can also be used to increase cancer growth, e. g., mechanical irritation. Tumors may increase in virulence after transplantation due to this cause, and it is a probable factor in the increase of virulence of recurring malignant tumors over the original growth after operation, and in the occasional conversion of a benign into a malignant tumor after operation or (more frequently) spontaneously. Not all tumors, however, are equally affected by mechanical irritation. The majority of internal chemical factors are unknown. There is no doubt, however, that embryonal malformations, e. g., pigmented moles, are frequently associated with cancer, probably for the following reasons: (1) The tissue being embryonal, its proliferative power is greater, and hence it is more likely to proliferate under stimulus; (2) the exposure of such malformations, by size and position, to mechanical stimulation; (3) the fact that the cause of a tumor growth may have been present during prenatal life, affecting embryonal cells which have larger potentialities for development than the cells of a specific tissue, and which, therefore, develop at first into a teratoma, and only secondarily into a cancer. Heredity also is one of the factors in the causation of cancer. From clinical evidence it seems likely that as a result of long-continued stimulation or as a result of a strong stimulus of short duration affecting especially sensitized tissue hereditary transmission takes place. This hereditary transmission of growth energy might be explained as due to micro-organisms, the tumor cells themselves in this case carrying with them the agency which causes the stimulus to continuous proliferation. The action of micro-organisms might also explain the conversion of a carcinoma into a sarcoma through their action on the connective tissue, to which they have been transmitted. The same factor might also explain the endemic occurrence of cancer in animals and in man. Other explanations, however, might well account for the transformation of tumors, and for the endemic occurrence

of cancer in which hereditary conditions can not be excluded. If micro-organisms should be present in certain cases it is probable they act by stimulating cells similarly to other physical and chemical agents.

Early Diagnosis of Cancer of the Uterus

DR. THOMAS S. CULLEN, Baltimore: In a certain percentage of cases at the Johns Hopkins Hospital there has been the association of carcinoma and myoma. In 18 instances carcinoma of the cervix was associated with myoma of the body; in 25 instances carcinoma of the body was associated with myomatous uterus. In the early stages the only clinical symptoms of carcinoma of the uterus are hemorrhage and discharge. Hemorrhage occurs in the early stages in quite a number of instances. The discharge is usually watery in character, depending on the breaking down of the tumor. In order to make an accurate diagnosis of cancer in the early stage it is necessary to remove a piece of tissue. If there is carcinoma of the body of the uterus it is necessary to curette. The diagnosis is more accurate as a rule than we can hope for in our usual clinical work. We not infrequently make mistakes in diagnosis which is only recognized after the tissue is removed. To be absolutely sure in making a diagnosis it is necessary that we be very familiar with the normal conditions. In the cervix the tissue looks the same practically in all stages of life. In the body of the uterus there are different appearances at different periods of life.

Cancer of the Breast

DR. WILLIAM L. RODMAN read a paper on this subject and exhibited illustrative charts.

The Roentgen Diagnosis of Gastric Carcinoma

DR. GEORGE E. PFAHLER: A thorough physical and clinical examination should precede the Roentgen study, but this should not require more than days or weeks. The stomach should be empty and usually a purgative should be given. The chief objections are the danger to which the operator is exposed, the time consumed and the expense involved. Gastric carcinoma is demonstrable when it changes the course of the food through the stomach, when it decreases the volume, interferes with peristaltic action, fixes or displaces the stomach, causes an indentation in the stomach wall, or modifies the rate of evacuation of the gastric contents. Great caution and thoroughness will have to be observed or errors will be made, and this valuable method of investigation will fall into discredit.

Discussion on Cancer

DR. JAMES M. ANDERS: In every suspicious case of uterine disease a histologic examination, either of an excised portion of the growth, or of a scraping from the cavity of the organ, should be insisted on by the general practitioner. The use of the *x*-ray as a means of detecting carcinoma in the early stages marks a distinct advance in our diagnostic methods. Negative results of the *x*-ray examination, however, should not deter us from resorting to exploratory operation in an otherwise suspicious case. Dr. Rodman's view that carcinoma of the breast, as elsewhere, is for a certain length of time a local affection and curable in the majority of cases by operation, at present is entirely tenable. That the vast majority of tumors of the breast are malignant is appreciated by the general profession, but not by the laity, and I feel strongly that it is the duty of the profession to enlighten the public on these facts. I can see more reason why a woman past 30 years of age should regularly present herself to a competent surgeon for an examination of the mammary glands and of the uterus than to a dentist for an examination of the teeth. This need is emphasized by the remark of Dr. Rodman that carcinoma of the breast is for a long period entirely without pain. Hence, unless discovered accidentally by the patient, the condition is apt to be no longer a local one when discovered by the physician or patient. One aspect of this subject, which seems to me important practically, and which I have elsewhere stated, is that we should have a definite working hypothesis with reference to the nature of carcinoma—one that could be generally accepted by the profession. This would stimulate and crystallize investigation along certain lines and give us fundamental truths not possible in the present chaotic methods of research. I believe that carcinoma is of infectious nature. If the profession can not accept the view of the infectious origin of cancer, let us adopt the hypothesis of which Dr. Loeb has given us the underlying factors. Thus would these leading theories soon be either proved or disproved, and on the whole more substantial progress be made. Mayo Robson has pointed out that probably all cases of carcinoma follow on a precancerous condition, an ulcer. If this be true and such precancerous condition, as it often can be, is promptly removed, in future we may have a reversal of the statistics, so ably and forcefullly presented by Dr. McGlinn.

DR. HENRY S. WIEDER: I have been impressed with the fact that in adenocarcinoma of the uterus we do not necessarily find infiltration. This has been more particularly observed in adenocarcinoma of the rectum. I have done most of the microscopic work for Dr. Rodman's department and have faithfully followed out all his benign and suspicious cases. I believe we have succeeded, in one or two cases, in operating on absolutely non-recognizable carcinoma, had it not been for the frozen section. A study of involution mastitis is of great importance, as 25 or 30 per cent. of such cases are liable to develop into carcinoma.

DR. JUDSON DALAND: We are unable to say what the *x*-ray will ultimately do in the diagnosis of gastric carcinoma. Much progress has already been made, but the wish of Dr. Pfahler and of other men working in this line is to be able to diagnose gastric carcinoma at so early a stage that surgical intervention will give results not heretofore attained. By the use of this method we can determine certain definite points in the study of the peristaltic waves. We recognize that indentations may occur by distinct definite spasm. We also know that indentations may occur from outside influences. Furthermore, we are able to study the relation and position of the shadow in regard to the pylorus which is very important.

DR. W. L. RODMAN: I have more faith in the *x*-ray examinations made by Dr. Pfahler than in the clinical gastric findings, and depend on his work more and more all the time.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fourth Annual Meeting, Celebrating the Centennial of McDowell's Operation, held in New York City, April 20-22, 1909

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Choice of Time of Operation for Pelvic Inflammation of Tubal Origin

DR. F. F. SIMPSON, Pittsburg, Pa.: Abscesses easily accessible for evacuation without traversing the free abdominal cavity are often best treated by early drainage. In other instances delay with definite but simple treatment would probably prove the better course. Many patients will thus have the normal functions of their organs restored and avoid operation. For the remaining cases which demand operative relief I am in the habit of choosing a time, first, when the patient has recovered from her acute illness and when her margin of reserve strength has been raised to its highest point of efficiency; second, when her temperature has been normal for a minimum period of three weeks; third, when the inflammatory exudate about the diseased tube has been completely absorbed, and fourth, when a careful pelvic examination is no longer followed by a decided or persistent rise of temperature.

DISCUSSION

DR. H. J. BOLDT, New York: So far as my personal observation is concerned, it is dangerous to operate during acute suppurative salpingitis, as in 99 cases out of 100 it is possible to wait until the acuteness of the attack has subsided, which will depend entirely on the condition of the patient. We may operate in the interval, if there is sufficient indication for operation. I believe that in most instances in which women have gonorrheal infection the regaining of normal function

of the organs of the pelvis is not to be expected. Whenever the Fallopian tubes are distended with pus to such an extent that we can readily palpate them through the cul-de-sac of Douglas we have no business to wait, but should open these tubes and evacuate the pus. It is unnecessary to do a radical operation in such cases.

DR. J. WESLEY BOVÉE, Washington: I would not be so conservative as to wait three weeks without a single rise of temperature during that time before operating. My experience with such appendages has been that they have not returned to normal; that rarely do they get into a condition for functionating, and that in most cases in which vaginal incision has been done for the emptying of pus the appendages and tubes require removal subsequently, and with them the uterus in some cases.

Method of Obtaining Reliable Knowledge of Exact Areas of Pain in Patients With Visceral Disease

DR. PHILANDER A. HARRIS, Paterson, N. J.: When a patient complains of pain, she is at once asked by the nurse to indicate the exact area of pain, and also to point to the center or point of most of her pain. The nurse then marks the outer boundaries, as well as the center or centers of pain complained of, employing therefor a definite code. All markings are maintained on the body until they are transferred by the physician to the history book or sheets. The nurse in entering on her notes descriptions of pains thus avoids the necessity of reference to anatomic regions.

Further Reasons for Examining and Removing the Appendix Before Closing the Abdomen

DR. A. LAPTHORN SMITH, Montreal: Abdominal section has now a very low death rate. The few deaths which do occur are due to something going wrong, the cause for which has not always been discovered, even after the abdomen has been reopened. I believe that this unknown cause is in many cases a chronic appendicitis, which either suddenly becomes acute or which causes obstruction of the disabled intestine by adhesions. The death rate from puerperal fever is now very small, and the few deaths which take place can not always be attributed to infection by the doctor, nurse, or even by the patient herself. I think that the abdomen should be opened and the appendix examined in every serious case, as I believe that many supposed deaths from puerperal fever are really due to a perforated or gangrenous appendix. The removal of this dangerous and useless organ, when it can be done without adding materially to the danger of the laparotomy, would insure the patient against the serious risk at a subsequent confinement.

DISCUSSION

DR. ANDREW F. CURRIER, New York: All will agree that, inasmuch as the appendix is such a vicious organ, it is well to look at it, and see what the trouble is. Supposing a small appendix is found without any appearance of disease, would there be justification for taking it out? It is rather straining the argument to conclude that because a patient complains of trouble in the region of the appendix it must of necessity follow that this organ is at fault. I think the principle laid down long ago, that the function of the surgeon is to remove diseased tissue or diseased organs is perfectly sound and safe, and the more we vary from that fundamental principle, the more likely are we to do harm. An operation for appendicitis is not absolutely free from danger. There are many cases in which hemorrhage has resulted and death followed. We should remove nothing but diseased tissue, and that which is not diseased should be left.

DR. REUBEN PETERSON, Ann Arbor, Mich.: Some years ago I gave the results of the removal of about 200 appendices when the abdomen was opened for the removal of other pathologic conditions. I showed then that 50 per cent. of the appendices were microscopically diseased, and presented a detailed report of my findings. At that time many members took exception to my conclusions that the appendix should be removed at the time of an abdominal operation undertaken for other conditions unless there were contraindications to it; consequently, I determined that I would only remove the appendix when it was macroscopically diseased in the same number of operations, if possible, to prove whether my conclusions were correct or not. Since that time I have only removed the appendix when it was macroscopically diseased, and my prediction has not been fulfilled, in that I have not had a case that has given me any trouble, when I have examined the appendix and have not found it macroscopically diseased and have left it within the abdomen. My position at present is that the appendix is always looked at in every abdominal operation, and if it is diseased macroscopically to such an extent that it seems wise to remove it, it is always removed. If, however, it is apparently normal it is left.

DR. I. S. STONE, Washington: I have had the misfortune of diagnosing in a certain case salpingitis as the cause of the patient's trouble, and yet at the operation I have found very little or no evidence of disease there. The appendix was examined and it did not explain the cause of the trouble, but after investigation the gall bladder was found to be the seat of trouble. This has been found in other instances to be the cause of trouble in the large clinics of this country. There may be symptoms of one disease, but on looking elsewhere more trouble is found than was expected.

DR. J. MONTGOMERY BALDY, Philadelphia: I was one of Dr. Peterson's critics at the time he presented his paper years ago. I rarely ever open the abdomen without examining the appendix, and rarely do I find anything the matter with it, that is, an infective disease coming from the interior of the appendix.

DR. JOSEPH TABER JOHNSON, Washington: I have advocated for a long time the theory of letting a perfectly healthy appendix alone. I could never see any rule or ethical right to remove a woman's appendix when it was healthy, when engaged to do absolutely another operation.

DR. J. WESLEY BOVÉE: Until we can decide the question of whether the appendix is diseased or not from its macroscopic appearance, I do not think we can settle the other question of whether to remove it or not. We get patients who have localized symptoms, and it is decided that their cases are chronic or recurrent types of appendicitis. We operate, and have been surprised to find that their appendices were normal. I recall the case of a girl of 17, who had been in the hands of general practitioners. She had three attacks of what was called appendicitis. I operated on her, and removed what I thought was a healthy appendix. The appendix was examined by a pathologist of the hospital, who pronounced it one of the most typical cases of chronic appendicitis he had ever seen, yet the organ was perfectly normal in appearance.

Ovarian Tumors Complicating Pregnancy, Labor and the Puerperium

DR. HERBERT R. SPENCER, London, Eng., presented a table of forty-one cases. An analysis of the table shows that the youngest patient was 20, the oldest 43, the average age being thirty.

Referring to the treatment, he said: The treatment of ovarian tumors complicating pregnancy, labor and the puerperium has been considered too much from a surgical standpoint; the obstetric aspect is not less important and in some cases is the dominant factor. Among the fifteen patients whom I have treated during pregnancy, there were three cases of contracted pelvis which necessitated the induction of premature labor in two of the cases, and would have done so in the third had the patient not aborted. A contracted pelvis may profoundly modify treatment and an obstetric examination of the pelvis should be made in every case. The existence of bilateral tumors in patients who have not had children may justify the postponement of operation in the hope of obtaining a living child, and should lead us whenever possible to conserve some part of the ovary. The scheme of treatment which I offer for discussion is as follows:

(A) During the first half of pregnancy ovarian tumors should be removed wherever their situation and whatever their size. The following tumors should not usually be removed: (1) Lutein cysts complicating hydatidiform mole; (2) bilat-

eral tumors causing no symptoms, if the patient is childless, or, if operated on, part of an ovary should be left behind; (3) primary adherent malignant cysts; (4) secondary malignant cysts.

(B) During the second half of pregnancy: (a) All large ovarian tumors and ruptured, inflamed and strangulated tumors should be removed; (b) small tumors which are in the abdomen or which can be easily pushed up out of the pelvis in the knee-chest or Trendelenburg position should be watched, and if no untoward symptoms arise should be removed either at the end of pregnancy or toward the end of the first stage of labor or after delivery; (c) small tumors which are incarcerated in the pelvis and can not easily be replaced in the abdomen may be watched and removed at the end of pregnancy or, if circumstances will allow, toward the end of the first stage of labor. If the tumors are adherent or solid, Cesarean section should be done. In all ovariotomies during pregnancy the vessels of the pedicle should be separately tied; the pedicle should be ligated as far as possible from the uterus and morphin should be given for the first two or three days after the operation.

(C) During labor the best treatment is abdominal ovariotomy, immediate in the case of large tumors, at the end of the first stage or after delivery in the case of small tumors. When done at the end of the first stage a second operator may deliver the child by forceps while the tumor is being removed. If the tumor be incarcerated in the pelvis the uterus should be withdrawn from the abdomen in order that the tumor may be dealt with. For solid and adherent tumors occupying the pelvis Cesarean section may be necessary. It should not be performed for cystic non-adherent tumors. When labor is advanced and a cystic tumor is impacted in the pelvis the circumstances may render it advisable to deliver the patient by the natural passages after evacuating the contents of the tumor by incision and packing the cyst with gauze; but the tumor should, if practicable, be removed within twenty-four hours, preferably through the vagina. Vaginal ovariotomy may be performed in non-adherent cases; but, though simpler in technic, it is inferior to the abdominal operation in that there is greater danger from hemorrhage, difficulty in safely tying the pedicle, the necessity of cutting up the tumor, impossibility of examining the other ovary and the presence of the vaginal wound. Induction of premature labor, forceps, version and simple tapping of a cyst as means of overcoming the dystocia produced by ovarian tumors are contraindicated.

(D) In the puerperium, ovarian tumors should be removed as soon as practicable, when possible, within twenty-four hours of delivery. If there is doubt as to the aseptic conditions of the uterus a delay of a week or two may be advisable, unless indications of strangulations or infection of the tumor arise, when it should be immediately removed.

Ovarian Tumor with Twisted Pedicle Complicating Pregnancy

DR. EDWARD P. DAVIS, Philadelphia, reported a case of ovarian tumor with twisted pedicle, which suggested some points of interest in connection with this subject. The patient was a married Polish woman, pregnant for the third time. In the case reported, the decision to deliver by abdominal section was based on the presence of a contracted pelvis, the failure of the child to descend, and the recognition of an abdominal condition of the abdomen possibly due to pelvic contraction. It was recognized that this abnormal abdominal condition might depend on some other complication, which could only be successfully dealt with by abdominal section. Study of the subject leads to the belief that but one course of treatment is justifiable in cases of ovarian tumor with twisted pedicle complicating pregnancy, namely, removal as soon as the diagnosis of the condition can be made; or as soon as indications of this condition are present; the complications of twisted pedicle are so serious as to demand immediate operation. If an exact diagnosis before operation is impossible, the conditions which simulate twisted pedicle in themselves demand operation. In the absence of an exact diagnosis, the obstetrician should operate in the interest of the patient.

Discussion on Ovarian Tumor

DR. CHARLES M. GREEN, Boston: I recall two cases of ovarian tumors complicating pregnancy. One of the women was four months pregnant. A diagnosis of very large cyst was made and the tumor was removed; the woman went to term, and was delivered safely. In a second case, a diagnosis of pregnancy was not made except by the history. The tumor was large. The abdomen was opened, and the tumor was found to be a multilocular cyst. A large trocar was used to withdraw the fluid, and as a result a considerable amount of the contents escaped into the abdominal cavity. This was wiped out. The uterus was found to be seven months pregnant, and was concealed behind a large tumor. The pedicle was tied as far as possible from the uterus. The woman made a pleasant convalescence, and shortly will be confined.

PROFESSOR HOFMEIER, Würzburg, Germany: I have operated for the removal of tumors during pregnancy, labor and the puerperium, in thirty or forty cases. I think it wise to operate in every case in which the tumor gives trouble. In the early stage of pregnancy with tumor, the tendency to abortion is great, and it is better to operate at this time than later. Abdominal section should always be resorted to, and not vaginal section.

DR. HENRY D. FRY, Washington: It seems to me that the pedicle becomes twisted as a complication of pregnancy more about the fourth or fifth month or in the puerperium, and my idea has been that it is due to the fundus of the uterus at that time being just about high enough for the tumor to rest on it, and then any movements or contractions of the uterus or abdominal wall twist the pedicle of the tumor. In a case which I had twisting of the pedicle occurred about the fourth month; there was complicating appendicitis, and the woman had most excruciating pain. I did not know she had this ovarian tumor with twisted pedicle until I made an incision for appendicectomy.

DR. EDWARD REYNOLDS, Boston: I recall six cases of large tumors complicating gestation and have had a number of smaller ones. In three cases of advanced labor there has been a large ovarian cyst impacted in the pelvis. In two cases I was able to raise the tumor by taxis and deliver the women by forceps. In both instances the tumor was removed later. In a third case the tumor resisted taxis, I opened the abdomen, raised the tumor by intra-abdominal taxis, removed it, and then, as the patient was advanced in labor, another operator applied forceps while I watched it from above, finally effected delivery, and closed the abdomen. In two cases I have operated at term, once removing a 28-pound ovarian tumor and a 12-pound child by Cesarean section.

DR. MATTHEW D. MANN, Buffalo: I wish to report the case of a woman with a large tumor whom I saw in consultation. She was advanced in pregnancy, and I advised that an operation be done at once, as she was uncomfortable on account of the size of the tumor. She refused operation, went through pregnancy and labor without any trouble, and had two subsequent pregnancies with the presence of this enormous tumor. She finally died after her last labor had been successfully accomplished. This case is a strong argument for the removal of large tumors complicating pregnancy.

DR. WILLIAM GARDNER, Montreal: I recall two cases of tumors complicating pregnancy that came under my observation many years ago. In one the tumor was removed without interrupting pregnancy, and the woman was subsequently delivered at term. The second patient was delivered in the eighth month successfully after the removal of a large tumor.

DR. J. WESLEY BOVÉE: In considering the removal of ovarian tumors during pregnancy, the size of the tumor has much to do with it. I have removed double pus tubes in the presence of a two months' pregnancy, and the woman has gone to term and has been delivered safely afterwards. The presence of double tumors is supposed to be a contributory cause of torsion of the pedicle.

DR. JOSEPH E. JANVRIN, New York: It seems to me that pregnancy increases the symptoms of torsion of the pedicle and makes it more apparent. Twisting of the pedicle in cases uncomplicated by pregnancy is not infrequent. I have seen fully a dozen such cases in which there was no pregnancy, and in which there were no special symptoms of twisting of the pedicle of the tumor.

President's Address: Ephraim McDowell, the Father of Ovariotomy

DR. J. RIDDLE GOFFE, New York, gave an interesting and valuable historical sketch of McDowell and ovariotomy, and closed his address in the following words: "A hundred years—a century—have rolled by since that day, and yet the luster of McDowell's achievement has grown steadily brighter to the present time. It was a fertile seed which, planted in appropriate soil, has risen to a mighty tree. It has manifold branches and has borne abundant fruit. McDowell did not live to see his operation adopted as a recognized surgical procedure, but he did have the satisfaction of knowing that Dr. Johnson, the editor of the *Medico-Chirurgical Review*, who declared in 1825 that he did not believe the operation had ever been done successfully and probably never would, the following year published in the same journal a recantation in which he said: 'A back settlement of America—Kentucky—has beaten the Mother Country, nay Europe itself, with all the boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with extraction of diseased ovaries. In the second volume of this series we adverted to the cases of McDowell of Kentucky, published by Lizars of Edinburgh, and expressed ourselves as skeptical respecting their authenticity. Dr. Coates, however, has now given us much more cause to wonder at the success of Dr. McDowell, for it appears out of five cases operated on in Kentucky by McDowell, four recovered after the operation and only one died. There were circumstances in the narrative of the first three cases that caused misgivings in our minds, for which uncharitableness we ask pardon of God and Dr. McDowell of Danville.' A broad and searching examination of all the claims put forward by aspirants, or their friends, to the honor of antedating McDowell has proved them, one and all, entirely groundless. The wide dissemination of the facts on which this decision rests, and the ripening influence of time have brought the members of the professional world into accord on this subject, so that I think I am safe in saying that in this centennial year McDowell is universally recognized throughout the world as the originator of the operation and entitled to be proclaimed the Father of Ovariotomy. McDowell was born Nov. 11, 1771, and died Jan. 25, 1830, in the fifty-ninth year of his age. Peace be to his ashes and glory be to his name."

SYMPOSIUM ON ANESTHESIA

The Nurse as an Anesthetist

DR. J. MONTGOMERY BALDY, Philadelphia: My inclinations lie in the direction of women as anesthetists, particularly trained nurses. The education of the trained nurse lies largely on medical and surgical lines, and she has, therefore, unless we except the woman physician, a sounder basis than have other women on which to begin. I can readily see that some women physicians would and will be available for the service, but in most instances many of the most serious objections obtain in their case as do in the case of men physicians. To the nurse, anesthesia will prove a stepping-stone to something better than she has originally chosen, a higher and more dignified position, and will appeal in its own way to her ambition and pride just as does the superintendency of a training school. The field will prove interesting, and my experience has shown that it will stimulate her to an effort to improve and perfect herself, and earnestly study the whole matter in hand.

Administration of Anesthetics

DR. H. J. BOLDT, New York: The competency of the anesthetizer is frequently more important to the surgeon than the competency of the latter's first assistant. Of the anesthetics usually used, ether is the least dangerous to life, although in some cases chloroform is the safer anesthetic. The belief that ether is more injurious to the kidneys than is chloroform is erroneous. Transitory albuminuria is common from the inhaling of either anesthetic, and casts are usually found in the urine for several days subsequent to the anesthetization. No anesthetic is entirely free of danger. Nitrous oxid mixed with oxygen is the safest, and if given by a competent anesthetizer may be administered for very long operations. Preliminary narcosis with scopolamin and morphin is considered risky, and should not be used by any one except an expert anesthetizer. Patients who are nervous and apprehensive as to the outcome of the anesthesia may be given a single preliminary dose of a narcotic twenty or thirty minutes before the inhalation anesthesia is begun. With patients who have nephritis, another method of anesthesia than that with ether or chloroform should be considered. Occasionally scopolamin-morphin narcosis answers for this purpose, and when these drugs are not followed by ether or by chloroform, the narcosis seems free from risk. Hypodermic injections of strychnin should not be indiscriminately used. Every hospital should have a person thoroughly trained in the giving of anesthetics. This duty should never be intrusted to an inexperienced person, as, for instance, a junior interne who has had perhaps only one or two practical lessons.

Anesthetics in Hospitals and Private Practice

DR. JAMES T. GWATHMEY, New York: The administration of anesthetics as a specialty is recognized in only a few of the larger cities of America to-day. In the light of recent discoveries, no surgeon is justified in adopting some one anesthetic and method of administration exclusively. There are four general anesthetics in common use, and there are three methods of administration. Nitrous oxid and oxygen is the only nonpoisonous anesthetic available to-day. Unfortunately, it is considered by men of large experience adapted to only about 30 per cent. of the surgical cases, namely, weak, anemic men and middle-aged women. These patients should have the benefit of this anesthetic whenever possible. Nitrous oxid and oxygen, supplemented by ether, can be used in at least 60 per cent. of all cases. Nitrous oxid and oxygen can and should be used as a preliminary to ether in at least 80 per cent. of the surgical cases. Oxygen administered with warm chloroform, either by the closed or open method, doubles its value as regards life, and given in this way it is as safe as ether and air. Ethyl chlorid is used principally as a preliminary anesthetic or for very short operations, and while not as safe, generally speaking, as nitrous oxid, is safer than this gas in certain selected cases. The problem to-day is not the matter of life and death on the table, but what methods and combinations will give the best results and leave the patient just as we found him.

Proper and Improper Methods of Administration of General Anesthetics

DR. S. C. GORDON, Portland, Me.: The first and most important point to be observed in the administration of an anesthetic is the proper preparation of the patient, both physically and mentally. The dread of the anesthetic is often much greater than that of the operation. Much may be done to prevent this. Second, too much haste is used in administration and too large a quantity used. Inhalers are faulty in construction; the simplest is always the best. The drop method is the true one. The cover of the mask should be porous and should allow the transmission of air through it during respiration. Third, careful attention is necessary on the part of the anesthetist, who should have an acquaintance with the ordinary, normal condition of the pulse and respiration, and a medical man or a trained nurse is preferred.

Renal Excretion During the Administration of Chloroform and Ether in Gynecologic Operations

DR. J. WESLEY BOVÉE, Washington, D. C.: 1. From the study of sixteen cases it would appear that the rate of excretion of urine is markedly lessened under anesthesia produced by ether or by chloroform. 2. Such diminution is greater from chloroform than from ether. 3. While chloroform produces a diminution in urea output, this continues to maintain a nearly normal proportion to urinary excretion, while ether produces a greater proportionate lessening of urea than of the urine. 4. These two anesthetics, when carefully and skilfully administered, have little effect on the production of casts and albumin in the urine, inducing it in some, stopping it in others and in others either not producing it or not materially modifying such production. 5. The Trendelenburg position greatly retards the rapidity of urinary output.

Adivsability of Making Practical Administration of Anesthetics a Required Part of the Medical Course

DR. REUBEN PETERSON, Ann Arbor, Mich.: The necessity of such instruction is shown by the experience of the past. There is inconsistency in requiring proficiency in the so-called scien-

tific branches of medicine while the student is allowed to graduate without having given an anesthetic. It is feasible to establish such a course as a part of the already overcrowded curriculum, and it can be done by the proper utilization of much time now wasted in unsystematic teaching. The whole question of the proper administration of general anesthetics in hospitals and in general practice is dependent on the scientific teaching of the subject to undergraduates.

The Trained or the Untrained Anesthetist

DR. HUNTER ROBB, Cleveland, Ohio: I would tentatively propose the following suggestions: 1. That a skilled anesthetist holding an appointment in the medical school as one of the faculty, and in the hospital as one of the staff, be appointed at a proper salary to teach and demonstrate the administration of anesthetics, and to personally administer them to the private patients, and to those in the general wards who are in a debilitated condition. 2. That in connection with a carefully prepared course of lectures on anesthetics and their physiologic action, each student be required to administer anesthetics to dogs or other animals a certain number of times. 3. That the lecturer next take the students the rounds of the operating rooms, and point out to them the details in connection with the service, and the points to observe in giving an anesthetic to the human being. 4. That each student be detailed to give the anesthetic at a certain number of operations under the guidance and criticism of the instructor, or one of his more advanced students; in this way we can be assured that all of them will have at least a fair amount of general experience. 5. That the senior, instead of the junior, interne be detailed to administer the anesthetic, as he would have had the opportunity of following and also of assisting with the administration of the anesthetic in a considerable number of cases by the time he has reached the position of senior assistant. I do not present this as a detailed plan, but in order to give an outline which can be developed according to the various conditions which exist in the different hospitals.

DR. ROBERT L. DICKINSON, Brooklyn, N. Y., detailed his experience with visiting anesthetists in some Brooklyn hospitals.

Improved Methods of Obtaining Anesthesia in Hospital Practice

DR. J. CLARENCE WEBSTER, Chicago: The routine administration of ether, as practiced in America, is to be condemned, because of unpleasant or dangerous sequelæ. My method consists in administering nitrous oxid with oxygen (2 per cent.) until the patient is unconscious, then ether until complete anesthesia is obtained. The latter is then abandoned, and the operation is performed under the influence of the nitrous oxid and oxygen mixture. This may or may not be followed by pure oxygen for twenty minutes. This method means greater safety and fewer unpleasant or serious after-results. Local anesthesia should also have a more important place in practice, and should supersede general anesthesia in certain cases.

Remote Results of Ovariotomy

PROFESSOR HOFMEIER, Würzburg, Germany: In retention cysts, fibroids, dermoids and pseudomucin cystomas, ovariotomy gives excellent results. The danger of secondary affection of the other ovary does not exist. The danger of a later spontaneous (idiopathic) affection is very slight; therefore, the removal of the one diseased ovary will be sufficient. With reference to the slight possibility of secondary implantations of the pseudomucin cystomas, special precaution during the operation is required. If there is a suspicion of carcinomatous degeneration of the removed tumor, the removal of the other ovary, which seems to be healthy, is not absolutely necessary in younger women. The resection of a beginning growth of the second ovary is only allowed in cases of retention cysts, fibroids, or dermoids. In cases of pseudomucin cystoma it is only allowed if the patient is ready to risk a second operation later; it is absolutely forbidden in carcinoma. In cases of cystoma serosum papillare, pseudomyxoma, sarcoma and teratoma, complete cure is possible, especially for papillomata and pseudomyxomata, even when bilaterally developed; also for unilateral sarcoma and teratoma. If on thorough macroscopic examination the second ovary seems to be healthy, it may be left, as the removal of both ovaries is detrimental to the general health of young women, and as the danger of a spontaneous attack of the second ovary is not very great. The state of the ovary, however, must necessarily be watched for several years. If both ovaries are diseased they must be completely removed with the uterus.

Influence of Corsets and High-Heeled Shoes on Symptoms of Pelvic and Static Disorders

DR. EDWARD REYNOLDS and DR. ROBERT W. LOVETT, Boston, contributed a joint paper on this subject:

This is an incomplete and merely preliminary report from the clinical and gynecologic point of view only of some of the results of experimental observation which have extended over about three and a half years on the general subject of the influence of attitude and proportion on abdominal and skeletal disorders, conducted from the gynecologic and from the orthopedic points of view. There is a large portion of the clinical field in which the patients are either suffering from both static (orthopedic) and pelvic lesions due to a common cause, or present symptoms which might be due to either, and demand a differential diagnosis. The experimental investigation of balance in the erect posture is a subject exceedingly difficult of investigation. The keynote to its comprehension is to be found by studying the relation of the center of gravity to the several portions of the skeleton. Certain types of figures tend to be free from ptoses and static ailments. Certain other types are inherently liable to them. The stable types of figure are but little affected by the varying types of corsets and shoes. The unstable types are greatly affected for good or evil by these articles of dress. In corsets there are types which are always productive of evil, and types which are sometimes thoroughly desirable and productive of good. From a gynecologic point of view, the effect of shoes must be considered in connection with that of corsets.

Surgical Treatment of Dysmenorrhea and Sterility in Women

PROFESSOR SAMUEL POZZI, Paris, described with great detail an operation for the relief of dysmenorrhea and the cure of sterility in which thus far he has not experienced a single failure. After this operation cervical metritis due to stenosis rapidly disappears, including leucorrhea. As regards sterility, in more than 25 per cent. of his patients pregnancy followed the operation, the women going to term without accident, and labors being normal. Rigidity of the cervix is not to be feared, for there is no cicatricial tissue as occurs after some amputations of the cervix.

Significance of Peritoneal Adhesions Following Operations

DR. HENRY T. BYFORD, Chicago: While classifying the formation of adhesions as one of the defensive acts of the peritoneum, I call particular attention to their secondary or harmful effects. Operations which lead to their production are either imperfectly or improperly performed, and extensive adhesions following poorly performed operations sometimes cause more suffering than was felt before. This is illustrated by cases from my records showing that serious conditions are sometimes due to postoperative adhesions of limited extent, and may be relieved by their separation. The mere separation of adhesions about diseased organs may lead to a cure of the symptoms, and that when the original causes of the adhesions are removed, the secondary adhesions that follow a properly performed operation are less extensive and less permanent. When postoperative adhesions are intestinal in character, muscular exercise and intestinal activity tend to relieve them without operative aid. Omental adhesions cause less immediate trouble, but the omentum has not the power of separating itself as have the small intestines. They act by interfering with the functions of the organs to which the omentum is attached, and by dragging on the stomach and colon, causing or perpetuating gastroptosis and dilatation of the stomach. The prevention of these postoperative adhesions is not to be attained by any one procedure or remedial agent, but by a properly executed technic. My preference is for small incisions with the performance of as much as practicable of the deep work by touch, and of the remainder at the surface, and without the introduction of sponges or packs into the abdominal cavity. When septic conditions and deep suturing or other manipulations requiring the supervision of sight are present,

it is necessary to make a long incision and pack the intestines out of the way. In pelvic cases, after a digital exploration I place the patient in the Trendelenburg position and try to make the intestines sink out of the field of the operation and assume their own position. A firm, immovable barrier of gauze can then be placed against them with almost no manipulation or relative displacement. With regard to drainage in laparotomies for pelvic conditions, I have the best results with the old-fashioned glass fenestrated tube; but I only leave it in place for a few hours and then supplant it by a strip of gauze that barely penetrates between the peritoneal edges. This gauze is changed about every four hours for two or three times, and the opening is then allowed to heal by adhesion, or so-called first intention. Such slight intestinal adhesions as form are soon broken up by peristalsis. When a gauze tampon drain is required, I prefer to place it low down and bring the end out through a large opening in the posterior vaginal fornix, and thus avoid the production of intestinal adhesions.

DISCUSSION

DR. JOHN G. CLARK, Philadelphia, discussed the anatomical and pathological factors concerned in the promotion of adhesions, and described some hitherto overlooked points in the technic which lead to this sequel. He likewise spoke of the frequency of postoperative adhesions and discussed their treatment.

DR. HENRY C. COE, New York, compared the present with the former after-results of laparotomy. Of from 70 to 75 patients who recovered from the operation in preantiseptic days, many were practically invalids for life, due to imperfect technic. Complications that are now rare were then common. The reasons are unskilful manipulation, infection, use of large silk ligatures, glass drains, bad after-treatment, etc. Opposed raw surfaces are likely to adhere; gauze packing and early movement of the bowels do not prevent adhesion. There may be a localized traumatic peritonitis, as in simple cases of interval appendicitis. Medical treatment is of no avail in marked cases. It is necessary to reopen the abdomen, separate the adhesions, and cover raw surfaces in such a manner that the adhesions will not reform. Although humiliating to abdominal surgeons to admit it, there are no certain means of preventing the formation of adhesions in complicated cases. The introduction of foreign bodies, films, powders, etc., is foreign to the spirit of modern surgery. Early purgation is not always a prophylactic measure, and is often harmful. We can not obtain healthy peritoneal flaps when there are extensive raw surfaces. The future method of prevention of adhesions still remains to be devised.

DR. J. CLARENCE WEBSTER, Chicago: In dividing the tissues with a knife or scissors, the operator should take care to bury raw surfaces. The same procedure is demanded when adherent structures are separated, and, although it is impossible to carry this out perfectly in all cases, various maneuvers may be employed, in many instances calculated to improve the condition of the parts.

Acute Postoperative Dilatation of the Stomach

DR. JOHN OSBORNE POLAK, Brooklyn, N. Y.: Acute dilatation of the stomach as a postoperative complication occurred 8 times in 1,000 abdominal sections. There were 2 deaths in patients with low hemoglobin percentages and low red cell counts. All patients were operated on under general anesthesia; 6 had had septic processes before operation; 1 had previous gastroptosis. Vomiting began from 24 to 50 hours after operation. There was diffuse abdominal pain and thirst, with continuous and persistent regurgitant vomiting, without peritoneal irritation, which enabled one to make the diagnosis. The treatment consisted of lavage, starvation, the right latero-prone position, with Murphy irrigation and nutrient enemata.

Ureteral Fistulas as Sequelæ of Pelvic Operations

DR. JOHN A. SAMPSON, Albany, N. Y., discussed certain important anatomic features of the ureters from the standpoint of ureteral fistulas. In the first place, he spoke of their relation to the other pelvic structures, especially to the parietal peritoneum, and to the uterus. He referred to the pelvic conditions in the operative treatment of which there is danger of injuring the ureter, as, for instance, extreme lateral displacement of the cervix; masses adherent to the parietal peritoneum covering the ureter; intraligamentary tumors; inflammatory exudates in the base of the broad ligament; tumors lateral to the ureter; cancer of the uterine cervix; injuries to the ureter which may result in fistulas, such as clamping, ligation, incision, failure of repair, and interference with blood supply. He classified ureteral fistulas, after which he discussed treatment and prophylaxis.

The Pathology of Ovarian Tumors

DR. THOMAS S. CULLEN, Baltimore, discussed under this head retention cysts, cystic ovaries, multilocular ovarian cysts, papillocystomas, carcinomas, dermoid tumors and teratomas.

Other Papers Read

"Indications for Cesarean Section in Placenta Prævia," by Dr. G. T. Harrison, New York; "Treatment of Extensive Cases of Uterine Prolapse and of Cystocele," by Dr. T. J. Watkins, Chicago; "Suprapubic Operation on the Pelvic Floor for Procidentia Uteri," by Dr. W. M. Polk, New York; "Conservatism in Surgery of the Pelvic Organs," by Dr. H. J. Boldt, New York; "Postoperative Peritoneal Adhesions," by Dr. George Gellhorn, St. Louis; "Mental Disturbances Following Abdominal Section," by Dr. Howard A. Kelly, Baltimore; "True Ileus," by Dr. William H. Wathen, Louisville, Ky.

The Banquet

A notable and culminating feature of this meeting, which was one of the most successful in the history of the society, was the dinner in commemoration of the first ovariotomy by Dr. Ephraim McDowell, given at the Waldorf-Astoria by the New York and Brooklyn fellows. Dr. J. Riddle Goffe acted as toastmaster. The speeches were not only instructive and scholarly, but valuable historical contributions.

The following toasts were responded to: "Ephraim McDowell, the First Ovariotomist," by Dr. Lewis S. McMurtry, Louisville, Ky.; "Mrs. Crawford: A Type of American Womanhood," by Dr. Edward P. Davis, Philadelphia; "McDowell's Successors in America," by Dr. Howard A. Kelly, Baltimore; "McDowell's Successors in the British Empire," by Dr. Herbert R. Spencer, London, England; "McDowell's Successors in France," by Prof. Samuel Pozzi, Paris, France; "McDowell's Successors in Germany," by Prof. Hofmeier, Würzburg, Germany.

DR. E. C. DUDLEY, Chicago, was one of the after-dinner speakers, and exhibited several lantern slides, one of them showing the home of McDowell, another which was supposed to represent McDowell performing the first ovariotomy; also slides of Mrs. Crawford both before and after the operation. He closed his speech with the following terse statements concerning the personality and achievements of McDowell:

We have seen him, a product of the heroic blood of Scotland, tempered by the dramatic and imaginative spirit of the Celt.

Intensified by contact with the adventurous cavalier colonist in Virginia.

A son of the central figure among the hardy pioneer soldiers and statesmen of the eighteenth century on the "dark and bloody ground of Kentucky."

Reared in the historic village of Danville under the character-building influence of this wonderful people, who knew how to join to the inspiration and freedom of the frontier what was most vital in the older education and civilization of the world.

A youth whose ardent temperament, intellect, magnetism and refinement gave great promise.

A pupil of Dr. Humphreys in Virginia.

Associating with cultivated physicians and surgeons of his own and other countries in the University of Edinburgh.

Attending the lectures of John Bell, a man of high intellectual endowment, an eloquent, forceful teacher, a bold and dashing operator, then in the zenith of his power.

Drawing from this source inspiration, original thought, confidence, boldness and judgment.

Returning to Danville to practice his profession.

Marrying the daughter of the first governor of Kentucky.

The personal and intimate friend of two presidents of the Republic.

Receiving unqualified recognition as the foremost surgeon in the Mississippi Valley.

Patiently waiting fourteen years until 1809 for an opportunity to break new surgical ground by the operation which has immortalized his name.

Subsequently repeating the operation many times with results not materially surpassed by his successors, until the period of aseptic surgery, seventy years later.

Too intelligent to be unconscious of the value of his service to mankind.

Yet with singular restraint delaying publication for seven years until final results could be measured.

Undismayed by a storm of almost universal vituperation and calumny from the surgical world whose sensibilities he had shocked by being in advance of his time.

In America denounced as a cracked-brained backwoods adventurer.

In England impaled on the horns of a dilemma, whether to be deemed an irresponsible fanatic or a fit subject for the executioner.

In France, with greater appearance of politeness but equal virulence, held up as the grand exponent of American audacity.

Answering a critic with the modest statement that he had tried to describe the operation so that an intelligent anatomist could understand it, and then letting time and conscience bring another critic to his knees with a prayer for "forgiveness" before "Almighty God and Dr. McDowell."

In the prime of life, at the summit of usefulness closing a mortal career which had shed luster upon his age and his country.

Classed with Jenner and Franklin, Washington and Lincoln, Marion Sims and Emmet.

The unique figure in a brilliant group of Kentucklans.

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Edward P. Davis, Philadelphia; first vice-president, Dr. Seth C. Gordon, Portland, Me.; second vice-president, Dr. Edward Reynolds, Boston; secretary, Dr. LeRoy Broun, New York; treasurer, Dr. J. Wesley Bovee, Washington, D. C.

Washington, D. C., was selected as the place of next meeting, in conjunction with the Congress of American Physicians and Surgeons, 1910.

Medicolegal

What Constitutes a "Free Hospital"

The Supreme Judicial Court of Maine holds, in Webber Hospital Association vs. McKenzie, where provision was made in a will for the maintenance of a free hospital, that the word "free" was not used in the sense of without compensation from any one receiving its benefits. Such a hospital is practically unknown. Income may be received from such as are able to pay, and yet the hospital is free. The word was used in its equally well-known meaning as defined by Webster, "thrown open or made accessible to all." This is also a well recognized definition of the word in law: "Open to all—public." It was therefore a public hospital "where the unfortunate may receive good care and skilful treatment" that the testator had in mind. No charge should be made to those unable to pay, but this would not prohibit receiving compensation from those who were able. It was to be open to all. The rich should not be turned away because of their wealth nor the poor because of their poverty. It should be free in the broadest sense.

Again, the court says that this will, while providing that the income of the fund in question should be used for the maintenance of a hospital, did not prohibit aid from other sources, but, on the contrary, suggested such assistance. Patients might contribute from their means. The state might make generous appropriations, benevolent friends might unite in guaranteeing an endowment. All these things might be done, and they would promote rather than thwart the testator's intent. Without their aid the work of the hospital might be limited; with it might be largely extended.

Substitution of Urine and Answer as to Abortions by Applicant for Insurance

The Court of Civil Appeals of Texas says, in Mutual Life Insurance Company vs. Crenshaw, that there was testimony before the jury which tended to show that in the personal examination of the applicant for the policy of life insurance in question she gave to the examining physician another person's urine as her own. This would have amounted to a false representation on the part of the applicant in the procurement of the policy, and, like any other false representation, all that was necessary to constitute it a defense was that it operated materially to induce the insurance. The testimony of the physician, which constituted all the testimony on the subject, was that had he or the company known of the fact it would for that reason not have issued the policy. The evidence amounted to this: That the deception practiced on him, if there was a substitution, contributed to the issuing of the policy, because, if he had known of the substitution, that fact alone would have defeated the application. This showed the materiality of the substitution in such a manner that it was clear the court should have assumed the fact of its materiality, and not submitted the question of its materiality to the jury.

But the question, "Have you suffered abortions or serious troubles in labor?" which was answered by applicant "No," the court holds was not shown to have been falsely answered by testimony that about thirty days before the issuance of the policy the applicant had suffered an abortion. It says that the question did not call for an answer in reference to a single abortion. The applicant, so far as the evidence showed, had not suffered abortions; hence her answer was true, considering the terms of the question. Being true, there was no issue to submit which involved the falsity of the answer. The terms of a policy which tend to forfeit it are not favored, and are strictly construed, and, if on any reasonable theory the answer may be taken as true, that construction will be placed on it.

No Allowance for Autopsies Held to Determine Diseases Causing Death

The Supreme Court of Indiana says that the case of Sandy vs. Board of Commissioners of Morgan county was brought by a physician to recover $25 for holding an autopsy on the body of a child on the order of and under the direction of the coroner of Morgan county. Some of the defenses were that the child at the time of and for days before its death was under the care of physicians, and its death was not sudden or unexpected, and it was not supposed to have come to its death by violence or casualty; that at the time of the death of the child the plaintiff was one of the attending physicians and had the child under his immediate care; that its death was not supposed to have been caused by violence or casualty, but from diphtheria; that no crime was supposed to have been committed, and that the autopsy was not held for the purpose of investigating or discovering whether a crime had been committed, but for the purpose of settling a controversy between the plaintiff and another attending physician as to the nature of the disease from which the child died, and was without authority of law.

The evidence in this case showed that the child had been visited by the plaintiff on Saturday morning without a discovery of the malady with which it was afflicted, diphtheria of the larynx, a disease difficult of diagnosis; that the child had been in and out of the house during most of the day preceding, and died suddenly early Sunday morning after having taken a drink of cold water which it arose from its bed and crossed the room to obtain; that it had been under the constant attention of its parents, both of whom were present at the time of its death, and there was not the slightest suspicion of death from casualty or violence; on the other hand, a physician called immediately after death at once suspected death from the true cause from the symptoms and attending circumstances. It was simply a case of death from a natural cause, somewhat difficult of diagnosis.

The plaintiff sought to justify his claim for holding an autopsy as a legal one on the ground that physicians were required to report to the secretary of the boards of health all deaths and the causes thereof; that no undertaker should bury a human body without a certificate of a physician as to the cause of death; and that the plaintiff refused to give a certificate of the cause of death because he did not know the cause, and hence the coroner was justified in holding an autopsy in order that a death certificate might issue. It might, quite as seriously, and with as much reason, be insisted in any case of baffled medical science, that an autopsy must be held in order that a death certificate might issue.

The statute with respect to restrictions of funerals in case of death from contagious disease was also relied on. Such statutes must be read in the light of the purpose of their enactment. The statute with respect to inquests and autopsies has from the earliest times been an arm of the criminal law, both to punish those guilty and protect those who are innocent of crime. The other statutes as to the certification of causes of death, etc., are for statistical purposes, and health regulations in the interest of the public health purely police regulations.

If there were nothing here but the fact of the autopsy being ordered, this court would be bound to presume that it was under a proper case for it. But here was the evidence, and with the requirement that the coroner, in order to justify an autopsy, must have a reasonable suspicion of violence or casualty, the question became one of the weight of the evidence, and there was evidence to support a finding in favor of the defendant board.

The Indiana statute itself defines the cases in which autopsies may be legally held as cases where inquests are legally held. It restricts the right or obligation to cases where death is supposed to have come by violence or casualty, and as a part of an inquest, and, while the statute ought not to be so strictly construed as to defeat its purpose, yet it must still be remembered that it is not to be extended beyond its evident purpose, and that a coroner is not the sole arbiter of the necessity; for, if this were so, a broad field would be opened for more conjecture as to the cause of death in any case where medical science may be baffled, and there would remain no such statutory direction or authority as we have, but a general power to direct autopsies, without any opportunity for review, by the courts. The action of a coroner would foreclose the question and we have seen that he has no such power.

Being a ministerial power, it must be exercised within some reasonable presumption that the death has resulted from violence or casualty. It can not be justified in the interest of science, for no such authority is given except as to prescribed persons, and there are distinct rights as to the dead. Otherwise the sacred dead might be the subjects of the surgeon's knife in any case in which the coroner might see fit, and at the public expense. His authority must be reasonably, and not arbitrarily, exercised. Being in the exercise of a wholly ministerial duty, acting under purely statutory authority, which is in itself the interpreter, and measurer of his powers, the plaintiff was charged with notice of his limitations; for, if this were not so, a coroner might by indirection do what he could not do by direction.

The rule is not changed by the fact that coroners are by statute given the power to direct autopsies. The power itself is limited to the specified conditions which invoke it, and the conditions are open to review by the courts. A reasonable supposition that a death occurs from violence or casualty is as necessary to confer jurisdiction to hold an inquest or hold an autopsy as that the body be found in his county.

The Latest Views of Cases of Alleged Injury to Nervous System and of the Testimony of Physicians Relative to Same

The Supreme Court of Minnesota holds, in the personal injury case of Johnson vs. Great Northern Railway Co., that when damages are sought to be recovered for injuries to the nervous system, alleged to have been caused by actionable negligence, the utmost circumspection must be exercised to avoid the injustice which is likely to result from the denial of substantial compensation for real injuries and in the award of damage in cases of honest mistake or of cunning fraud.

The value to be attached to the testimony of physicians concerning alleged nervous disorders is to be determined, among other things, by the extent and character of the examination actually made by the testifying physicians, generally as to the plaintiff's physiological condition, and especially as to the condition of his nervous system.

That subtle nervous disorders may exist, and that, as our civilization produces less hardy and more highly organized individuals, they tend to occur more frequently, and to result more seriously, the court says, is obviously true.

It is equally familiar that even the more highly trained specialists can not readily distinguish some forms of actual nervous derangement from analogous physiological conditions which may have been falsely described through ignorance, or which may have resulted from conscious malingering. By a stronger reason, in such cases, the testimony of even a reputable practitioner is to be weighed with especial care.

The difficulty is, of course, greater where the condition occurs without a lesion—i. e. in cases of traumatic neurosis or traumatic neurasthenia—than where external force has produced a morbid change in the functions or texture of the tissues or organs. Well-considered decisions have gone so far as to hold that no considerable verdict will be allowed to stand on proof of subjective symptoms only, not only because the existence and extent of such subjective condition depends on the veracity of the patient affected, as he must be interested in the outcome of the litigation, but also because of the frequent miracles of recovery after application of "a greenback plaster."

None the less the abnormal conditions may be real and result seriously. Much testimony must be admitted, as a matter of course, which is subject to the same objection as to interest. Many verdicts are of unquestionable validity which are subject to the same criticism of their probable substantial injustice. It is clear that wrong is likely to result from denial of substantial damages for real injury, and also from their award in cases of honest mistake or cunning fraud.

It is certain that, where nervous derangement due to an accident is alleged, courts are called on to exercise the utmost circumspection. They would pervert their functions if they undertook to prescribe how physicians should proceed, or to dogmatically determine what significance should be attached to the results of their examination. The law, which is fixed, is not authority on physiological science, which is progressive. Judges are not physicians. The courts, as Lord Bowne pointed out, are not the proper places for conducting experiments in inductive science. Indeed, the primary purpose, to subserve which expert evidence on the immediate subject is received, is to advise courts of the results of such questions asked of nature and the conclusions of scientific men prevailing at the time of the trial. Accordingly, as opinions of physicians change, the legal effect of facts testified to must also change.

A few elementary principles of diagnostic neurology are now so generally recognized by scientific authority that they should ordinarily be applied. The examination of the patient should be systematic and thorough, and extend to the anatomy of the individual to the extent circumstances demand, to the physiological conditions generally of his person, more specifically his organs likely to be affected, and especially of his deeper and superficial reflexes. The authorities insist that by such examination, an expert, qualified by learning and experience, is able to determine the true condition of the person examined beyond his power of successful simulation or misrepresentation, and to expose the ignorance, mistake or fraud of opposing experts. There may be cases so clear that conformity with so exhaustive tests may not be necessary, but doubtful instances must be scrutinized with all known care and tried by all available means.

The plaintiff in this case, by the sudden movement of a car, was thrown to the ground, and in falling struck his back and left side. He called two physicians. Both found a lameness or tenderness of the back. But neither of the plaintiff's two experts appeared to have had the necessary knowledge and experience of a specialist in nervous diseases. Indeed, one of them frankly admitted that "he did not claim to be an expert on nervous diseases," and was called as a general practitioner, who as such had attended the patient. Neither testified to have made an adequate examination on which to rest the conclusions of any serious nervous trouble. The diagnosis of neither purported to be based on investigation into the normality of the plaintiff's physical condition generally, or of his organs or of his deeper or superficial reflexes. The examination was not systematic. Indeed, it was extremely limited and cursory. It amounted at most to a partial investigation into the loss of sensation in the legs. The most significant item was that at places "the hair had turned white." It was frankly admitted, however, that this could not have been connected with the accident.

On the other hand, the two physicians called by the defendant testified that they had made a thorough and scientific examination of the plaintiff's person. They examined "his eyes, his feet, and his legs, . . . the lungs, heart, abdomen, his back, his nervous sensations, or knee jerks, and in fact everything connected with the general examination." The urine on analysis was found normal. They concluded that the

plaintiff was not and had not been suffering "from any trouble with his nervous system, or with his spinal column;" that "they could find nothing the matter with him as a result of any injury he had received" except tenderness and soreness in the muscles of the back, from which his recovery would be comparatively quick. The record itself demonstrated the competency of these physicians as experts. It is evident, the court thinks, that the expert testimony necessitated the belief that the plaintiff was not seriously injured.

The plaintiff's testimony and conduct must be considered, not so much in the light of the plaintiff's interest in the outcome of the litigation, which was naturally for a jury to weigh, as of the plaintiff's inevitable lack of technical knowledge necessary to the correct estimate of his physical condition and of the cause of any deviation from the normal.

Lastly, the court deems it impossible, under such circumstances, to sustain a verdict of over $4,000 for the injury that was actually shown.

Current Medical Literature

AMERICAN

Titles marked with an asterisk(*) are abstracted below.

Boston Medical and Surgical Journal

April 29

1 Intermittent Hydronephrosis. D. F. Jones, Boston.
2 *Treponemata (Spirochætæ) in Syphilitic Aortitis; Five Cases, One with Aneurism. J. H. Wright and O. Richardson, Boston.
3 *Treatment of Obstruction of the Lachrymal Duct. J. C. Berry, Worcester, Mass.

2. Treponema in Syphilitic Aortitis.—Wright and Richardson give the essential points in the histories and gross anatomic appearances of the lesions in five cases. The aortitis presents certain definite characters. The regions involved are mainly those of the first portion and the arch. Beyond this area the lesions are less marked and fewer, till they become indistinguishable from those of ordinary arteriosclerosis. Microscopic examination shows that the lesions in all the cases are essentially the same, and like those characteristic of syphilitic aortitis. The most striking feature is the extensive transformation of the media and intima into fibrous tissue, and the degeneration and necrosis of this tissue. In all the cases, sections prepared by Levaditi's first published method showed treponemata, identical in morphology with *Treponema pallidum*. They were found practically only in a degenerative and necrotic area. The finding of the treponemata in an area of primary necrosis in the media, as well as in association with the necrosis in the fibrous tissue, seems to justify the belief that the micro-organisms are the cause of the necrosis by their local action on the tissue, and that they are to be regarded as the cause of the whole process, although the possibility that they are merely secondary invaders can not be denied. Their numbers and distribution in the lesions would suggest that they rapidly multiply at a given point, produce necrosis and then degenerate and disappear.

3. Obstruction of the Lachrymal Duct.—Berry summarizes his experience as follows:

1. In Infants

1. Ordinary cases of dacryocystitis in infants require no treatment other than nasal cleanliness, boracic acid collyria and slight pressure over the sac.
2. More persistent cases may require nasal aspiration or possibly the passage of the lachrymal probe.
3. Obstruction is sometimes due to membranous closure of the nasal end of the canal.
4. Intranasal inspection is always prudent and at times necessary when probing the duct.
5. The seton is a remedial measure of great promise in certain rebellious cases.

2. In Adults

1. The ideal treatment is by gradual dilatation, avoiding violence to the membrane of the canal.
2. If this proves unsuccessful, then division of the stricture with rapid and full dilatation is necessary.
3. Dilatation beyond 2 mm. (Bowman's probe No. 8) is seldom necessary. Forced dilatation to 4 mm. (Theobold No. 16) exposes the eye to nasal contamination and lessens the propulsive power of the sac.
4. The leaden style can be employed to advantage between treatments, reducing the frequency of probing and favoring absorption of hypertrophied tissue by continuous pressure.
5. Acute cases of inflammation of the sac can be aborted if seen early, the treatment being to wash out the sac, inject argyrol and follow with hot stupes of lead and laudanum, general antiphlogistic treatment being observed.
6. Following phlegmon, the passage of the probe should be delayed until swelling and induration subside.

Medical Record, New York

May 1

4 *A Catalytic Theory of Infection and Immunity. J. W. McLaughlin, Austin, Tex.
5 *Cerebral Lobules. W. Wood, New York.
6 *Ureteral Calculi. A. V. Moschowitz, New York.
7 Mastoiditis Followed by Infected Sinus Thrombosis in a Young Pregnant Patient. M. D. Lederman, New York.
8 Conservative Treatment of Some Traumatic Injuries of the Extremities. W. T. Dannreuther, New York.
9 Further Research Regarding the Phosphatic Index or the Pulse of the Nervous System. J. H. Dowd, Buffalo, N. Y.
10 Fluoroscopy and Radiography. A. Judd, New York.

4. Infection and Immunity.—McLaughlin says that it is conceded that artificial or acquired immunity resulting from an attack of the disease immunized against or from inoculations of the pathogenic agents of the disease is a condition of the organism caused by specific antibodies, or by immunizing tissue changes of the body. While a knowledge of the nature and action of pathogenic agents, the origin and nature of specific antibodies, and the character of changes produced in the body tissues by toxins is clearly necessary to a rational knowledge of pathogenesis and immunization, our present knowledge is insufficiently definite therefor. McLaughlin is forced to conclude that the "internal forces of matter" must consist of more than molecular heat energy, and that behind molecules and independent of the transformations of heat energy there are unknown forces—properties of matter, which determine mechanical combinations. He reviews the present conception of molecular structure and molecular energy, which give us the complete molecule as it is described in text-books. Taking up the study at this point, where it has been abandoned, McLaughlin says that the addition of two new features will make it apparent that molecular energy is derived from molecular structure, and that the changes of matter in chemical reactions result from the interaction of atomic and molecular forces in securing equilibrium in end products: The first is the presence of universal ether surrounding atoms in the molecules and accurately reproducing the vibrations as ether waves. The second is an adjustment of conflicting ether waves in the molecules by "interference," into waves of energy whose periods coincide in crest and trough. "The energy of a molecule is an exact reflex of its chemical and physical structure." He then discusses the conditions under which molecular energy becomes catalytic energy. A catalyst is not a definite chemical substance, but a substance possessing a definite physical structure. Toxins and pathogens are to be classed as catalytic agents, as well as ferments and enzymes are. Specificity of action and the production of specific antibodies are features which definitely characterize catalytic reactions. The specific selective action of a ferment for the substrate is coincident in crest and trough of the wave periods of the two substances. McLaughlin's argument leads him to the conclusion that "pathogenesis is a catalytic reaction in which the pathogen or toxin is the catalyst, a group of albumin molecules is the substrate, and a specific antibody the end product. In this process the albumin molecules of the substrate are dissociated and transformed into a toxalbumin, and this is the essential cause of the disease produced, the type of which is determined by the character of the toxalbumin, and the character of the toxalbumin is determined by the species of pathogen and the vulnerable substrate engaged in the reaction." An antibody—say an antigen to a pathogen or an antitoxin to a toxin—combines with, neutralizes, and thus make harmless, the pathogenic agents; but since such combinations are bodies foreign to the organism, they are soon disposed of, and the immunity produced by them is transient in character. On the other hand, immunity produced by the destruction of the substrate is lasting, and will remain until the substrate is restored.

5. Cerebral Lobules.—Wood says that cerebral localization properly deals with centers. If the cerebral segments are one by one examined in detail, it will be found that they lend

themselves wonderfully well to the theory of sensory and motory centers, and that these sensory and motory centers are definitely formed eminences or lobules, each with a function, and that they tend to be regular in order and to lie along definite lines. On this view he describes and figures a simple and practical method of mapping out the brain and reading these psychologic centers or mind eminences.

6. **Personal Observation of Ureteral Calculi.**—Moschcowitz says that in addition to the three points at which the ureter is described in the text-books as being usually narrowed, there is a fourth point, between the vesical end of the ureter and the point where it crosses the common iliac artery, perhaps a trifle nearer to the former. It is due to a dense, sharp, fascial band passing horizontally inward from the lateral pelvic wall to the median line. He discusses the symptomatology. Cystoscopic inspection of the bladder he regards as of comparatively limited value in the diagnosis, but an *x*-ray examination is an absolute necessity in every case. While every calculus remaining indefinitely in the ureter must ultimately lead to infection of the kidney, still Moschcowitz makes it a rule not to advise operation as soon as diagnosis is made, but to observe the case for a short time and give Nature a chance to propel the stone. He cites cases to prove the judiciousness of this practice. Morphin and hot applications are the measures indicated. He has no experience with the injection of lubricants into the ureter.

New York Medical Journal

May 1

11 The Doctor and the Nurse. C. P. Noble, Philadelphia.
12 The Toxic Secondaries of Chronic Tonsillar Disease. A. R. Elliott, Chicago.
13 *Treatment of Appendicitis. B. Robinson, New York.
14 Diagnosis and Differential Diagnosis of Appendicitis. H. Fischer, New York.
15 *Appendicitis Complicating Pregnancy. C. O. Cooke, Providence, R. I.
16 Extrauterine Pregnancy. J. N. Warren, Sioux City, Iowa.
17 *Common Errors in the Treatment of the Urethra and Bladder. J. D. Pedersen, New York.
18 *Bedside Clinic Summary of the Treatment of Acute Rheumatism at the Indianapolis City Hospital. S. E. Earp, Indianapolis.
19 Hypernephroma of the Kidney. W. L. Duffield, Brooklyn, N. Y.
20 *Poisons: Especially Potassium Permanganate. J. C. Attix, Philadelphia.

13. **Appendicitis.**—Robinson states that it is difficult at times, not to say impossible, to distinguish accurately and positively, between appendicitis and colitis. In some cases, McBurney's point, rigidity, blood count, symptomatic antecedents, are similar. When all these are identical one or other disease may exist alone. It is frequently the case here, as elsewhere, that two diseases, so far as the mere organ is concerned, may exist together just as is found elsewnere, notably, in uterus and ovaries; in larynx and trachea. Admitting the truth of the foregoing to be wise and prudent, we should treat the patient medically, in what seems the best way to accomplish a cure. This treatment should be:

1. Rest in bed, which means little or no voluntary movement while pains are acute, temperature elevated, and other general symptoms threatening or grave.
2. Ice bag, or preferably hot water bag, or poultices, or stupes with hot water and oil of turpentine and soap liniment; flannel covered, or not, with oil silk or rubber tissue.
3. Laxative enema with castor oil and oxgall, sometimes a little glycerin being added. Flaxseed tea should preferably be the menstruum of the enema.
4. A moderate amount of codein every hour or two, by mouth, if pains seem to require it, from 1/20 to 1/10 or 1/5 grain.
5. In rare instances only are hypodermic injections of morphin to be given, and then only for excessive pain.

15. **Appendicitis During Pregnancy.**—Cook emphasizes:

1. Appendicitis should be suspected in all cases of right-sided pain ocurring during pregnancy.
2. Inasmuch as constipation is an important factor in the etiology of the disease, the physician should see that the bowels are kept free throughout the pregnant state.
3. The symptoms are often misleading.
4. The diagnosis is not easy.
5. The prognosis is good in the acute catarrhal and chronic recurrent types, but extremely grave in the gangrenous, perforative and abscess type.
6. The treatment is operation in every case as soon as the diagnosis is established. In cases of doubt operation is safer than waiting.
7. The mortality of appendicitis complicating pregnancy is the mortality of delay.
8. Appendicitis during pregnancy is more dangerous than in the non-pregnant state
9. The true prophylaxis in a child-bearing woman who has had a well-marked attack of appendicitis is an interval operation.
10. The possibility of appendicitis after labor in predisposed patients should be borne in mind in order not to mistake such for puerperal sepsis.
11. In the perforative cases with general diffuse suppurative peritonitis, occurring at the end of pregnancy *accouchement forcé* is indicated, followed by incision and drainage of the peritoneal cavity.

17. Abstracted in THE JOURNAL, July 11, 1908, p. 160.

18. **Acute Rheumatism.**—Earp reports favorable results in twelve cases of acute rheumatism under the following routine treatment: The use of calomel is followed by Dorsey's magnesia mixture until the bowels are freely open, then they are kept so. The patients should drink plenty of water. Thirty grains of sodium salicylate should be given each three hours until pain is relieved or there are unpleasant head symptoms. The dose is then decreased to twenty grains, and when the joints can be used freely without pain or stiffness the dose is again decreased to fifteen grains four times a day for one week. When the patient considers himself well, ten grains are given three times a day for two weeks. Oil of wintergreen was applied to the joints twice a day, and they were dressed in cotton and oiled silk or rubber sheeting. There has been some slight deviation from this rule to meet special indications in individual cases.

20. **Potassium Permanganate Poisoning.**—Attix briefly discusses the subject and definition of poisons and poisoning generally and reports two cases of poisoning by potassium permanganate of which no case is yet recorded in any text-book on toxicology. Antidotes are, weak ferrous sulphate, sodium sulphite, sodium hyposulphite, oxalic acid—which should never be used unless the amount of permanganate taken is definitely known and the exact molecular proportion of the acid can be given—and sulphurous acid, which should be used if it can be obtained, because (1) potassium permanganate is alkaline—sulphurous acid is, of course, acid; (2) potassium permanganate is an oxidizing agent—sulphurous acid is a powerful reducing agent; (3) sulphurous acid is not poisonous and an excess will do no harm and it acts very rapidly.

Surgery, Gynecology and Obstetrics, Chicago

April

21 *Removal of the Gall Bladder. A. MacLaren and H. P. Ritchie, St. Paul.
22 *Operative Treatment of Simple Fractures. W. A. Lane, London, Eng.
23 Gunshot Wounds of the Abdomen. C. Graham, Henderson, Ky.
24 *Treatment of Infected and Complicated Cases of Labor by Abdominal Section. E. P. Davis, Philadelphia.
25 *Chromocystoscopy in Functional Renal Diagnosis Based on Employment of Indigocarmin. B. A. Thomas, Philadelphia.
26 Post-Traumatic Sarcoma of the Skull. J. F. Smith, Wausau, Wis.
27 Adenomata of Descending Colon, Sigmoid and Rectum. A. Samuels, Baltimore.
28 Value of Enterostomy in Intestinal Obstruction. J. P. Lord, Omaha, Neb.
29 Uterosacral Ligaments. D. H. Craig, Boston.
30 Shock, Its Relation to Operations of Emergency. W. H. Allport, Chicago.
31 Evolution of the Military Surgeon. N. Senn, Chicago.
32 Dermoid Cyst of the Kidney. W. S. Goldsmith, Atlanta, Ga.
33 Present Status of Ethyl Chlorid as a General Anesthetic. W. Webster, Winnipeg, Canada.
34 Unique Accident to a Meckel's Diverticulum. B. Van Swearingen, Fort Wayne, Ind.
35 Cases of Primary Tuberculosis of the Appendix. F. H. Jackson, Houlton, Me.
36 Two Operations for Total Destruction of the Gall Ducts. E. E. Lanphear, St. Louis.
37 Acetonuria, with Coma, Apparently Cured by Intravenous Transfusion of Bicarbonate of Soda Solution. B. F. Van Meter, Lexington, Ky.
38 Intestinal Obstruction Due to Round Worms. B. F. Van Meter, Lexington, Ky.
39 Simple Operation for Complete Removal of Tonsils with Notes on 800 Cases. G. E. Waugh, London.
40 New Instrument for Opening the Skull. J. M. Neff, Chicago.
41 Operative Treatment of an Irreducible Fracture of Surgical Neck of Humerus. J. H. Jacobson, Toledo, O.
42 The Instrument Tree. S. E. Newman, St. Louis.
43 *Treatment of Uterine Retrodisplacements. J. M. Baldy, Philadelphia, Pa.

21. **Cholecystectomy.**—MacLaren and Ritchie analyze 21 cases of cholecystectomy, with reference to diagnosis, operative measures, and results, and present the cases in tabular form. MacLaren discusses the operation. Incidentally he records an experience which leads him to the conclusion that the removal of gallstones through a stab is seldom justifiable. His principal object in writing, he states, is to impress the young man with the fact that the mortality of gall-bladder opera-

tions will not be "2 per cent." in his hands until he has done several hundred operations. He enumerates the following as conditions under which we should not perform cholecystectomy:

1. In a cystic gall bladder, when from the appearance and history it is certain that the obstruction of the cystic duct is recent, even though the gall bladder does not contain bile.
2. In calcareous disease or gangrene of a small portion of the fundus of the gall bladder.
3. In moderate sized perforations or wounds.
4. In moderately adherent and "somewhat" contracted gall bladders.
5. In the presence of pancreatitis, especially if complicated with dilatation, stone, or other disease in the common duct.

22. **Fractures.**—Lane repeats his conclusions of 1904, that in fractures operative measures offer the patient the following advantages:

(a) They at once relieve the patient from the pain of any movement of the fragments on one another.
(b) They free him from the tension and discomfort due to the extensive extravasation of blood between and into the tissues.
(c) They shorten the duration of the period during which he is incapacitated from work, since union is practically by first intention, and, consequently, very rapid and perfect.
(d) Last, and by far the most important, they leave his skeletal mechanics in the condition in which they were before he sustained the injury.

Lane describes the technic and discusses the apparatus used. The article is abundantly illustrated with radiographs.

24. **Infected and Complicated Cases of Labor.**—Davis refers to cases of labor complicated by disproportion between mother and child, and in which, through neglect or bad treatment, the patient has become infected and sustained considerable laceration. The child is dying or dead, and the indication is to deliver the mother, thus saving her life. The intravaginal treatment of these cases is successful in a certain number. When the disproportion between mother and child is slight and laceration has not opened the peritoneal cavity, embryotomy offers a favorable prognosis; but when disproportion is marked and the mother seriously injured and infected, Davis believes that delivery by abdominal section, followed by the Porro operation will give the best results. He reports ten cases, in six of which the Porro operation was performed, and all of the patients recovered. By Porro operation he means that designed and performed by Porro, in which the stump is fastened extraperitoneally to the lower end of the abdominal incision, the greater part of it subsequently separating by sloughing. From a surgical standpoint, the operation is unsatisfactory, but in the class of cases described its results justify its performance.

25. **Chromocystoscopy in Functional Renal Diagnosis.**—Thomas says that in 90 per cent. of cases normal kidneys excrete indigocarmin in from 7 to 14 minutes after its injection intramuscularly; in only 10 per cent. is the excretion suppressed as long as 20 minutes. If the blue coloration appears later than 20 minutes after the injection the functional sufficiency of the kidney is probably impaired. If the excretion fails to appear at all the kidney is the seat of a grave pathologic process, provided the ureter is patulous. The intensity of the excretion (light blue or dark blue) depends on the concentration of the renal secretion and the individual excretory power of the organ. A surgically diseased kidney excretes the coloring matter less intensively than its sister organ, or not at all. The test is simple and by observation of the two ureteral orifices, differences between the two kidneys are readily and speedily noted.

43. **Uterine Retrodisplacements.**—Baldy says that the time will come when men will be just as much ashamed to speak and write of uterine retrodisplacement as a distinct disease, as they are at present so to speak of ascites as such. Occasionally cases occur, in which it would seem as though the displacement were the only thing which would explain the symptoms from which the woman suffered, and in which a replacement of the uterus cured the patient; but the more one sees of gynecologic practice, the fewer unexplainable cases come under observation, and the closer one is able to limit this list of exceptions. Retrodisplacements of the uterus, Baldy says, are mostly coincident with other lesions, and when such is the case the symptoms almost universally come from the associated disease. The treatment of retrodisplacements is, then, a misnomer; it should be the treatment of conditions in connection with which retrodisplacement of the uterus occurs as an incident. The displacement of the organ can be ignored and the result will be perfectly satisfactory. In the badly infected cases in which Ochsner uses his operation, similar to one formerly used by Baldy, of attaching the fundus to the abdominal wall, both ovaries being removed, Baldy almost without exception performs the amputation hysterectomy, and finds none of the objections or bad results which seem to worry Ochsner. He then describes his operation for use in those cases in which no disease can be found, and again in those in which the disease found has been dealt with by appropriate treatment, and it is found in addition desirable to bring a retrodisplaced fundus forward; for instance the ovaries and Fallopian tubes, or part of them, being left, the peritoneum of the pelvic walls back of the uterus and broad ligaments being denuded and bleeding, and where adhesions between them and the fundus would be apt to occur, if they were allowed again to come into contact, or when it is desirable to draw up prolapsed ovaries and Fallopian tubes. This operation has been peformed by himself and his assistants between 100 and 200 times. He knows of 20 or 30 pregnancies following its performance. In no case has there been the slightest irregularity, although a number of the women had had trouble in former pregnancies. It is not so easily performed as a ventrosuspension, but it requires no more skill than is possessed by any surgeon competent to open the abdomen.

Bulletin American Academy of Medicine, Easton, Pa.

April

44 What Constitutes a Liberal Education in the Twentieth Century? G. E. MacLean, Iowa City.
45 Idem. T. McClelland, Galesburg, Ill.
46 Idem. C. F. Thwing, Cleveland, O.

Vermont Medical Monthly, Burlington

April

47 Sanatorium Treatment of Tuberculosis. H. D. Chadwick, Pittsford.
48 Valvular Lesions of the Heart. A. Morton, St. Albans.
49 Conservatism in Surgery. M. R. Crain, Rutland.

Kentucky Medical Journal, Bowling Green

April 1

50 Serotherapy. J. E. Wilson, Falmouth.
51 Best Methods for a County Society to Pursue in Order to Accomplish the Most Good. W. H. Witherspoon, Harrodsburg.
52 Endometritis, with Special Reference to Prophylaxis. T. C. Holloway, Lexington.
53 The Burro. S. Bailey, Searchlight, Nevada.
54 Croupous Pneumonia. J. W. Crenshaw, Versailles.
55 •Conservative Treatment of Chronic Middle-Ear Discharge from Standpoint of the Specialist and General Practitioner. H. Horn, Bonn, Germany.
56 General Therapeutics. J. A. Caldwell, Peach Grove.
57 Eclampsia. A. Dixon, Henderson.
58 Diagnosis and Treatment of Lobar Pneumonia. A. L. Thompson, Nebo.
59 Anatomy of the Skull. C. G. Stevenson, Becknersville.
60 Gross Anatomy of the Brain and Spinal Cord. E. R. Bush, Winchester.
61 Physiologic Action of the Brain and Spinal Cord. G. F. Clark, Winchester.
62 Early Symptoms and Diagnosis of Cancer of the Rectum and Sigmoid. G. S. Hanes, Louisville.
63 Eclampsia. J. O. Moore, Mattie, Ky.

April 15

64 Practical Management of a Case of Typhoid. W. A. Jenkins, Louisville.
65 •Hydrotherapy as an Agent for Increasing Drug Absorption. C. Pope, Louisville.
66 Fractures of Skull with Report of a Case. R. L. Ireland, Louisville.

55. **Chronic Middle Ear Discharge.**—Horn discusses the questions:

1. What forms of purulent middle ear discharge can be successfully treated by way of the external ear and Eustachian tube?
2. What are the methods to be employed with the various classes?

He adds for those who are not specialists that in ear work it is far better to know what not to do than what to do. A radical operation is usually necessary when with the chronic discharge:

1. The mastoid process is also involved in the process.
2. The overlying soft tissues are swollen.
3. A subperiosteal abscess is present.
4. A fistulous opening or the scars of one are present.
5. An acute exacerbation appears with increased discharge of pus, spontaneous ear pain, tenderness on pressure and half-sided headache.
6. In spite of conservative local treatment, a constant factor is present.

7. Epidermis masses and granular débris are continually washed out during the treatment.
8. During the course of the treatment complications appear; facial paralysis, labyrinth diseases or intracranial complications.

Horn discards the so-called dry treatment. At a recent meeting of the German Otological Society every one was in favor of a preliminary antiseptic syringing followed by careful drying and insufflation of boric acid. He insists that it is the syringe and water that must be aseptic, and that the substances blown in have no influence on the end-result, unless it be an unfavorable one due to irritation. The treatment proposed by Löwenberg in 1870 has still an important place in the methods at Bonn. It consists of the use of 95 per cent. alcohol, especially when the mucous membrane of the ear is red, swollen and thickened. The alcohol may be poured into the ear, no powder should be inflated, but a strip of gauze or a pledget of cotton may be inserted in the ear. Horn cautions against treating an operative case conservatively or a conservative case operatively, and adds: "Educate your finger and the mirror to discover the remains of the adenoid that the other fellow overloked. Never forget that the Eustachian tube plays an important rôle in both the causation and treatment of middle-ear suppuration. A dirty syringe and a good result do not go together. Keep your powder dry—and see that it is finely powdered. If you are a general practitioner, do not touch an ear discharge coming from the attic. Do not waste time on experiments, the great triumvirate is enough—boric acid, alcohol and the intratympanic tubes."

65. **Hydrotherapy to Increase Drug Absorption.**—Pope says that, tersely stated, we may say that under hot and cold water applications, we can expect greater absorption of oxygen and elimination of carbon dioxid; increased quantity and better quality of bodily glandular juices; destruction of waste material, rendering toxins innocuous; the rejuvenation and cleansing of tissue of such a nature as, in a physiologic sense, to cause the individual within his tissues to be born again; in which the medicament used may play its integral part.

New York State Journal of Medicine, New York

April

67 Further Observations on Prostatectomy Based on One Hundred Cases. J. B. Squier, New York.
68 *Suppurative Otitis Media—Etiology and Pathology. J. E. Sheppard, Brooklyn.
69 *Modern Methods of Non-Operative Treatment in Suppurative Otitis Media. E. P. Fowler, New York.
70 *Indications for and Results of Operative Treatment, Including the Simple and Radical Mastoid Operation. W. C. Phillips, New York.
71 Purulent Diseases of the Middle Ear, the Treatment of Meningeal, Sinus and Labyrinthine Complications. S. M. Smith, Philadelphia.
72 *Meller's Operation for Removal of the Tear Sac. A. E. Davis.
73 Treatment of Eclampsia. W. L. Wallace, Syracuse, N. Y.
74 *Diagnosis of Ovarian Dermoid Cysts. J. C. MacEvitt, Brooklyn.
75 Unusual Cases of Venous Thrombosis. H. W. Johnson, Hudson.
76 Infectious Phlyctenular Kerato-Conjunctivitis. J. S. Kirkendall, Ithaca.
77 The Galvanocautery as a Factor in Peritonsillar Abscess. I. W. Voorhees, New York.
78 *Pokeberry Poisoning. F. W. Lester, Seneca Falls.

68, 69, 70. Abstracted in THE JOURNAL, Feb. 20, 1909, p. 654.

72. Abstracted in THE JOURNAL, Feb. 6, p. 496.

74. **Ovarian Dermoid Cysts.**—MacEvitt reports two cases which combat the theory of a uniform progressive development, and on the contrary, demonstrate at times a remarkably rapid growth. While this symptom has no great weight from a diagnostic standpoint, MacEvitt asks whether, when we have joined thereto fever, pain, vomiting, and free fluid, we are not justified in adding it to the symptomatology of ovarian dermoid. It is his belief that dermoid cysts have no more malignant influence on their surroundings than any other peritoneum-covered growth. He advances the theory that it is only after inflammatory degeneration of their sac, when perforation ensues, permitting the escape of their acrid irritating contents that a localized peritonitis is developed, followed by its train of symptoms. The frequently given diagnostic point of the tumor being anterior to the uterus is likewise unreliable. In his case the location was on either side. He concludes that even with the additional symptoms which he has been able to record—(1) occasional very rapid development, (2) vomiting after the onset of pain, (3) aggravation of pain in the tumor for a few days prior to the menstrual epoch, (4) unreliability of Kuster's sign—position of the tumor anterior to uterus, (5) irregularity of outline, (6) abdominal free fluid—the diagnosis of ovarian dermoids can never be positive; at the most it is inferential.

78. **Pokeberry Poisoning.**—Lester records the case of a boy, 12 years of age, whom he found as completely relaxed in his muscular system as though under full anesthesia. One could have tied him in a knot. He was breathing very shallowly and quietly, so that one could hardly detect any respiratory sounds or motions unless one approached to within a foot of the patient. The pulse was soft, full and slow, about 60, regular and not the pulse of collapse. The boy salivated freely from his mouth, there being a constant raising of thick, frothy saliva. His reflexes were gone, the eye bearing the touch of finger without any lid contraction. In the absence of any history of poisoning, Lester administered stimulants, and with the use of warm water obtained free emesis; the vomitus determined the nature of the patient's seizure, being largely composed of the pokeberries. The use of liberal doses of castor oil at short intervals was persisted in for some hours, the patient becoming gradually better, until consciousness was regained nine and one-half hours after the initial attack. The whole picture was one of motor relaxation. There was even evidence of this in the widely open pupil, hanging jaw, tongue settled back in the pharynx, and inability to swallow, for an hour. Yawning and stretching were evident as the patient became better, but no sweating of body or tremor was present.

Illinois Medical Journal, Springfield

April

79 *Cutaneous Manifestations of Syphilis. J. N. Hyde, Chicago.
80 *Serodiagnosis of Syphilis and Its Clinical Value. W. J. Butler, Chicago.
81 Value of the Spirochete in Diagnosis of Syphilis, with Special Reference to the Primary Lesion. B. C. Corbus, Chicago.
82 *Congenital Syphilis. I. A. Abt, Chicago.
83 *Laws of Heredity. W. E. Castle, Cambridge, Mass.
84 Inheritance in the Evening Primrose. R. R. Gates, Chicago.
85 *Light Thrown on Eugenics by Experiences of Animal Breeding. E. Davenport, Urbana.
86 Reappearance of the Once Common and Fatal Milk Sickness, or "Milk Sick," with Successful Rational Treatment Deduced from Clinical Findings. W. E. Walsh, Morris.
87 *The Sanatorium—Its Influence and Value. J. W. Pettit, Ottawa.
88 *How Shall we Apply the New Antituberculosis Law? Resources not Available. E. J. Brown, Decatur.
89 *The Tuberculosis Dispensary as it May be Established under the New Law. E. A. Gray, Chicago.
90 Physical Examination of Below-Grade Children. C. Hedger, Chicago.

79 and 82. Abstracted in THE JOURNAL, Feb. 6, 1909, p. 498.

80. Published in the *New York Medical Journal*, January 30, *Chicago Medical Recorder*, March, and *Alabama Medical Journal*, March, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

83. **Heredity.**—Castle discusses the material basis of heredity, Mendel's law, the production of new varieties, sex as a Mendelian character, hidden factors, atavism, and the origin of varieties by loss of factors, the law of blending inheritance, and intermediate types of inheritance. He summarizes his conclusions as follows: In all forms of inheritance alike, each parent makes, as regards every separately heritable character, a unit contribution to the offspring. Consequently, the offspring are as regards every character two fold, or dual, organisms. When the offspring in turn reproduce, they transmit the conditions which they received from their parents; they transmit those conditions separately in alternative inheritance, blended in blending inheritance, and partially separate, partially blended in other forms of inheritance.

85. **Eugenics.**—Davenport discusses the results of mating between superior, inferior and mediocre individuals, and shows that with exceptional parents some of the offspring will be exceptional individuals, but also that, whatever the parentage, many individuals will be inferior in respect to many or even all essential characters, and these are known as degenerates. Animal breeding has two distinctly different objects, arrived

at by almost opposite methods: (1) the promotion of a few exceptional individuals, like race horses and fancy stock generally; (2) the raising of the general average of the breed. In the first case, only exceptional individuals are used for breeding purposes. Some would imitate this procedure with humans, but Davenport holds that we secure the same results in a good degree through preferential mating. It is not true, as a rule, that people choose opposites. On the contrary, tall tends to marry tall, and short, short; musical, musical, etc. To go beyond this natural result of preferential mating, we should be obliged to apply to our marriage laws of the best people, such restrictions as would dangerously interfere with the deepest human instincts, in which attempts we should either fail, or else we should blot out of the race its choicest asset and most valuable character—love. The raising of the average may be attained by breeding from the few or by excluding the lower limits of the race. We can not exclude as widely as the animal breeder does, but we can aim at the absolute exclusion of the degenerate. Davenport sums up by saying that he can not approve the oft-proposed interference with the marriage relations of normal people. Any mistakes they make will be blotted out mechanically and will not permanently weaken the race, or greatly hamper it at any given moment. But he would deal differently with the criminal class and take every opportunity to eliminate them from the possibility of reproducing their kind when they are once adjudged to be degenerates.

87, 88, 89. Abstracted in THE JOURNAL, June 27, 1908, p. 2153.

Pennsylvania Medical Journal, Athens

April

91 *Progress in Otology. F. W. Frankhauser, Reading.
92 *Redundant Sigmoid. J. G. Clark, Philadelphia.
93 *Etiology, Diagnosis and Treatment of Acute Intestinal Obstruction. L. B. Kline, Catawissa.
94 Intermittent Intestinal Obstruction from Kinks in the Large Bowel. J. B. Roberts, Philadelphia.
95 Intestinal Obstruction as a Complication of Acute Appendicitis. L. Brinkmann, Philadelphia.
96 *Intestinal Obstruction in Connection with Tuberculosis or Tuberculous Peritonitis. H. M. Neale, Upper Lehigh.
97 Treatment of Septic Cases of Appendicitis. F. A. Goeltz, Erie.
98 *Early Signs of Ectopic Gestation. R. R. Huggins, Pittsburg.
99 *Treatment of Terminated Ectopic Pregnancy. C. A. Stillwagen, Pittsburg.
100 *Present Day Therapy. J. P. Roebuck, Lititz.
101 *The Non-Medicinal Treatment of Disease. D. Riesman, Philadelphia.
102 Surgical Treatment of Some of Our Medical Cases. W. H. Hartzell, Allentown.
103 Treatment of Alcoholism. L. M. Gates, Scranton.
104 Chronic Diarrhea Relieved by Removal of a Chronically Inflamed Appendix. J. Saller, Philadelphia, and J. L. Atlee, Lancaster.
105 Homatropin Poisoning with Complete Transient Aphasia. A. Brav, Philadelphia.
106 Review of Two Hundred and Fifty Cases of Pulmonary Tuberculosis. H. L. Bates, Philadelphia.
107 Sewage Disposal for Country Houses. H. B. Wood, Philadelphia.

91. Abstracted in THE JOURNAL, Oct. 3, 1908, p. 1178.

92. **Redundant Sigmoid.**—Clark arrives at the conclusion that this condition is due, not to a primary defect, but to an unequal growth of the large intestine after birth. He cites in support Piersol's "Anatomy," to the effect that the large intestine grows at the expense of the sigmoid flexure, which, at birth, forms nearly one-third of the whole, while at four months it has assumed practically its permanent proportion. He considers that the explanatory key to developmental anomalies is to be found in this statement. He reports four cases of operation for redundant sigmoid and concludes that, in exaggerated cases, nothing short of a radical resection of the redundant organ will effect a cure. But as resection of the sigmoid is a grave major operation the symptoms must be very threatening to justify it. In cases in which the redundancy has been encountered in the course of another operation, he has lightly tacked the dorsum of the sigmoid to the peritoneum of the lateral abdominal wall, on a level with the brim of the pelvis, with the intention of causing light adhesions and thus preventing the redundant loop from falling into a vicious position in the pelvis. Some of the patients have been almost or entirely relieved by this simple procedure.

93, 96, 98, 99, 101. Abstracted in THE JOURNAL, Nov. 7, 1908, pp. 1629, 1630.

100. **Present-Day Therapy.**—Roebuck says that present-day therapy is advanced so slightly that the question arises whether or not we have retrogressed. About 33 per cent. of all prescriptions dispensed are for non-official drugs. The lowest percentage is from Philadelphia—22 per cent. of non-official drugs—and the highest from Scranton, with a percentage of 45. While some of the liquid preparations of official drugs with non-official formulas have value, the Pharmacopeia and National Formulary will show preparations of equal value, with the advantage of a standard which should be used by professional men. To use nostrums and preparations with incomplete formulas is a disgrace to science and ethics. The remedy for the evil lies in education through the medium of the medical journals and publications which reach the every-day practitioner. Since the Council on Pharmacy and Chemistry of the American Medical Association is publishing a list of non-official drugs, if such remedies are to be used, it is at least possible to make an intelligent selection.

Journal Michigan State Medical Society, Detroit

April

108 Small Epidemic of Acute Anterior Poliomyelitis. J. G. R. Manwaring, Flint.
109 *Plea for Early Diagnosis in Carcinoma of the Uterus. J. H. Carstens, Detroit.
110 Appendicitis. W. K. West, Palmesdale.
111 Anesthetics, Especially Somnoform. G. C. Hafford, Albion.
112 *Acute Toxemia after Chloroform Anesthesia. F. W. Heysett, Freesoil.
113 Rabies in Man and Animals. G. W. More, Ionia.

109, 112. Abstracted in THE JOURNAL, Aug. 29, 1908, pp. 785, 786.

Southern California Practitioner, Los Angeles

April

114 Surgical Progress of the Past Year. A. S. Lobingier, Los Angeles.
115 Medical Progress of the Past Year. D. J. Frick, Los Angeles.
116 Smallpox—Its Initial Stage. I. R. Bancroft, Los Angeles.

Western Medical Review, Omaha

April

117 Diet in Nephritis. T. Truelsen, Omaha.
118 Treatment of Pathologic Scar Tissue. C. A. Roeder, Grand Island, Neb.
119 Use of the *X*-Ray in Malignant Growths. W. H. Mick, Omaha, Neb.

Old Dominion Medical Journal, Richmond, Va.

April

123 Recent Studies in the Physiology and Pathology of the Parathyroid Glands. W. N. Berkeley, New York.
124 *Prognosis in Tabes Dorsalis. W. Sinkler, Philadelphia.
125 Consideration of Factors in the Mortality of Appendicitis; Based on a Consecutive Series of Five Hundred Operations, with Two Deaths. L. G. Guerry, Columbia, S. C.
126 Paresis of a Levator Palpebrarum Occasioned by Frontal Sinusitis. W. C. Posey, Philadelphia.
127 Aggressive War against Typhoid. W. D. McCaw, Washington, D. C.
128 Importance of the Digestive Tract in Treatment of Pulmonary Tuberculosis. I. J. Archer, Black Mountain, N. C.
129 Open-Air Treatment in Surgical Tuberculosis, with a Word About Sunshine. O. Smith, Asheville, N. C.

124. **Tabes Dorsalis.**—Sinkler points out that recent advances in medical science and modern methods of treatment have made a great change in the prospect of betterment or comparative cure in many cases of tabes dorsalis. He discusses the three stages of the disease and says that in the first stage good results are often obtained or the disease may be arrested; antisyphilitic remedies, massage and hydrotherapy are indicated. In the ataxic stage our efforts should be directed to the re-education of the muscles, the improvement of general health and the building up of the nervous system; potassium iodid and mercury, or, when these are not given, strychnin, glycerophosphate of lime, and arsenic should be used. Sinkler says that he is sure that he has seen benefit from the solution of arsenic, gold and mercury. The most valuable method of treatment is the so-called Fraenkel movements. Rest is an important factor. Electricity in his experience is of comparatively little value except as a mechanical method for muscular exercise. Tabetics are very susceptible to cold, so that a mild climate is desirable. In the paralytic stage there is nothing to be done but to make the patient comfortable. Aluminum chlorid in 5 grain doses has proved of advantage in his hands.

Medical Herald, St. Joseph, Mo.

April

130 *Diagnosis of Bright's and Allied Diseases. N. S. Davis, Chicago.

131 *Cancer of the Uterus. H. J. Boldt, New York.

130, 131. Abstracted in THE JOURNAL, May 8, 1908, p. 1535.

Therapeutic Gazette, Detroit, Mich.

April

132 *Intermittent Intestinal Obstruction from Kinks in the Large Bowel. J. B. Roberts, Philadelphia.

133 *Etiology, Diagnosis and Treatment of Acute Intestinal Obstruction. L. B. Kline, Catawissa, Pa.

134 *Intestinal Obstruction with Tuberculosis or Tuberculous Peritonitis. H. M. Neale, Upper Lehigh, Pa.

135 *Intestinal Obstruction as a Complication of Acute Appendicitis. L. Brinkmann, Philadelphia.

136 *Treatment of Septic Cases of Appendicitis. F. A. Goeltz, Erie, Pa.

137 *Redundant Sigmoid. J. G. Clark, Philadelphia.

132, 135, 136. Published also in the *Pennsylvania Medical Journal*, April, 1909.

133, 134. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1629, and also published in the *Pennsylvania Medical Journal*, April, 1909.

137. Published in the *Pennsylvania Medical Journal*, April, 1909. See abstract No. 92.

Bulletin Johns Hopkins Hospital, Baltimore

April

138 *Experimentally Induced Choked Disc. H. Cushing and J. Bordley, Baltimore.

139 *Excretion of Hexamethylenamin (Urotropin) in the Cerebrospinal Fluid and Its Therapeutic Value in Meningitis. S. J. Crowe, Baltimore.

140 *Is the Pituitary Gland Essential to the Maintenance of Life? L. L. Reford and H. Cushing, Baltimore.

141 *Experimental Surgery of the Mitral Valve. B. M. Bernheim, Baltimore.

142 Hydrocephalus Treated by Drainage into a Vein of the Neck. R. D. McClure, Baltimore.

143 Effort to Determine the Sensory Path from the Ocular Muscles. P. W. Harrison, Baltimore.

144 Some Methods of Anastomosing Blood Vessels. B. M. Bernheim, Baltimore.

145 *Effect of Narcosis on the Body Temperature. S. G. Davis, Baltimore.

146 Postoperative Pulmonary Complications. J. Homans, Boston.

138. Choked Disc.—Cushing and Bordley report experiments undertaken to establish the etiology of choked disc. The authors summarize the experiments as follows:

1. The introduction of fluid under tension into the intracranial subdural space will produce an acute edematous swelling of nerve head and retina—in other words, a choked disc—which can be observed during life with the ophthalmoscope and demonstrated by a study of the tissues after death.

2. Simple digital compression exerted against an area of the dura exposed by a trephine opening, and without the introduction of new fluid under tension, will produce similar lesions.

3. These acute edemas of the nerve head and retina are associated, under both conditions, with distention of the optic sheath, particularly of its subarachnoid spaces.

4. Venous congestion does not seem capable, without the concomitant action of the fluid under tension in the optic sheath, of producing more than the congestive features of choked disc; in other words, under the conditions of the experiments it failed to occasion any appreciable edema of the nerve head.

5. Long-continued pressure against a dural defect can lead to retinal hemorrhages and other clinical, as well as histologic features, which characterize chronic choked disc in man.

6. The introduction between the skull and dura of foreign bodies which are capable of subsequent increase in size and which possess some elasticity, will closely simulate the action of a new growth, and, placed either above or below the tentorium, will lead to the production of choked disc.

It may, therefore, be stated in conclusion, that:

1. The occurrence of the neuroretinal edema is primarily dependent on the passage of cerebrospinal fluid under tension from the subarachnoid spaces of the interpeduncular region into the vaginal sheath of the optic nerve, and that cerebral decompression often allows the process to subside, owing to a resultant diminution of tension from release of the confined fluid.

2. The experimental work corroborates many of the more recent clinical observations in showing that a choked disc, even of considerable height, may be rapid in its formation, and, provided it has not gone on to the stage of new tissue formation, may rapidly subside; and thus speaks strongly in favor of a mechanical, as opposed to a chemical or inflammatory, origin for the lesion.

139. Hexamethylenamin in Meningitis.—Crowe reports experiments on the excretion of hexamethylenamin in the cerebrospinal fluid and summarizes the results as follows:

1. Urotropin (hexamethylenamin), when given by mouth, invariably appears in the cerebrospinal fluid. This fact has been demonstrated by a large number of observations on man, and is also true for dogs and rabbits.

2. The largest amount of urotropin (hexamethylenamin) is present in the cerebrospinal fluid from 30 minutes to an hour after the ingestion of the drug.

3. After doses of urotropin, within therapeutic limits, a sufficient amount of the drug appears in the cerebrospinal fluid to exercise a decided inhibitory effect on the growth of organisms inoculated into this fluid after its removal from the body.

4. Following a subdural inoculation of dogs and rabbits with streptococcus, from 60 to 80 grains of urotropin a day, given under conditions which insure absorption, will markedly defer, and in some cases prevent, the onset of a fatal meningitis.

5. In view of these observations, the prompt administration of urotropin is advised in all clinical cases in which meningitis is a possible or threatened complication, or even when meningeal infection has actually occurred.

140. The Surgery of the Pituitary Gland.—Reford and Cushing report experiments which lead them to sustain Paulesco's contention, that a total hypophysectomy is incompatible with the continuance of life, although its average duration in their series of typical extirpations has been somewhat longer than that observed in Paulesco's cases. Consequently they infer that the surgery of the hypophysis must be limited either to the removal of tumors which may implicate the pituitary gland, or, in case of hypertrophy, to a partial hypophysectomy.

141. Surgery of the Mitral Valve.—Bernheim has undertaken to answer experimentally the question raised by Sir Lauder Brunton: Can a mitral stenosis be transformed by surgical measures into an insufficiency with benefit to the patient? He reports additional progress with special reference to the operative methods that have been used in the attempt to narrow the left ventricular orifice, which has been found the most difficult of all valvular lesions to reproduce. Although on numerous occasions he has been able to constrict the mitral ring by a suture, and has succeeded in some of these cases in subsequently dividing the constriction, he has not yet been able to reproduce the typical presystolic murmur or the usual symptoms characterizing the "button hole" stenosis in man. Hence the question of possible symptomatic benefit from the procedure still remains unanswered. He describes the method pursued. The procedure now used is far easier to carry out than the original stenosing operation, takes less time, the hemorrhage is easily and accurately controlled, and the operative mortality is low. These he considers points in favor of the future possible operation on man according to Brunton's suggestion.

145. Anesthetics and Body Temperature.—Davis reports experiments that tend to support the previous observations made by Kappeler, Allen and Mills, and to justify the following conclusions:

1. Chloroform produces a loss of body temperature approximately equal to that produced by ether.

2. Surrounding the field of operation with wet towels will greatly increase the loss of body temperature and should therefore be studiously avoided.

3. The loss of temperature produced by ether narcosis will not be greatly increased by the preliminary administration of a moderate dose of morphin.

4. The excessive application of heat to an individual while under the influence of morphin will lessen the usual loss of body temperature from this drug, and the additional administration of ether under these circumstances may lead to a rise in body temperature rather than the expected fall.

5. Warming the vapor before inhalation will likewise prevent the loss of body temperature, or may actually increase it in a degree proportionate to the temperature of the vapor and also to that of the operating room. An undue elevation of body temperature from this source is doubtless injurious; the object should be to maintain even temperature.

6. In a human patient kept warm and dry during anesthesia the loss of temperature will be much less than when the body is wet and exposed; and, furthermore, the fall in temperature is less, under ordinary conditions of anesthesia, in a room with a temperature above 26.6° C. (80° F.) than in a room of a lower temperature.

7. Patients consequently should not only be kept dry and warm, but be anesthetized in a room free from draughts, and should not be transferred to a cold room, even after the anesthetic is discontinued.

8. With such profound variations in body temperature as have been observed, with many of the patients complaining of being cold even after they have returned to their beds, it perhaps is not surprising that post-anesthetic pulmonary complications are not uncommon.

Atlanta Journal-Record of Medicine

March

147 Pneumonia. J. R. Baird, Atlanta.

148 Blood in the Urine (continued). A. L. Fowler, Atlanta.

149 Empyema. C. P. Ward, Atlanta.

150 Gonorrheal Cases Treated with Serum. M. S. Rosenthal, Baltimore.

151 Acute Traumatic Tetanus Treated by Magnesium Sulphate (continued). A. P. Heineck, Chicago.

152 Surgery of the Appendix. R. R. Kime, Atlanta.

153 Sex Education. F. Cabot, New York.

154 Glass Drainage Tubes in Prostatic Surgery. F. Cabot, New York.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

March

155 Treatment of Typhoid with Solution of Calcium Creosote (concluded). L. Kolipinski, Washington, D. C.
156 Medical Treatment of Acute Appendicitis. T. G. Green, Shelbyville, Ind.
157 *Clarification of our Concepts Concerning Hysteria. T. A. Williams, Washington, D. C.
158 Practical Applications of the Newest Principles Introduced by Dr. Sajous. J. M. Taylor, Philadelphia.
159 Lupus Vulgaris. J. V. Shoemaker, Philadelphia.
160 Efficiency and Sufficiency of United States Pharmacopeia and National Formulary Preparations for the General Practitioner. J. M. Anders, Philadelphia.
161 Uterine Moles, with Special Reference to Hydatidiform Mole. J. S. Raudenbush, Philadelphia.
162 Tuberculosis of the Breast. W. L. Rodman, Philadelphia.

157. **Hysteria.**—Williams discusses this subject in the light of the recent discussion at the Paris Neurological Society, and says that from the foregoing considerations it follows: (1) That from hysteria must be eliminated cases of trickery, simulation and mythomania; (2) that to the syndrome of hysteria do not belong modifications of reflectivity; (3) that the vasomotor and trophic neuroses have nothing to do with hysteria; and (4) that other psychoneurotic states, such as psychasthenia, neurasthenia, cenesthopathia, mental debility, and confusion, the early phases of dementia præcox, dream-like states, and emotional perversions must not be confounded with hysteria. The hit-or-miss psychotherapy of encouragement in many cases does more harm than good. It is as dangerous, therapeutically, as digitalis or the knife in hands ignorant of pathology.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 17

1 *Disorders of the Cerebral Circulation and Their Clinical Manifestations. A. E. Russell.
2 *Rôle of the Saliva in the Transmission of Tubercle. N. Neild and E. V. Dunkley.
3 Two Unusual Conditions of the Gall Bladder. H. Lett.
4 Vascular Degeneration: A Study in Cardiac Arrhythmia. A. M. Gossage.
5 *Some Applications of the Precipitin Reaction in the Diagnosis of Hydatid Disease. D. A. Welsh, H. G. Chapman and J. C. Storey.
6 Recurrent Hematoporphyrinuria with Toxic Symptoms not Due to Sulphonal. W. L. Brown and H. O. Williams.
7 Intussusception of Sigmoid of Colon. A. Don.
8 Disease of Hip Joint Due to Streptococcal Invasion, with Secondary Manifestations in other Parts. W. O. Beddard.
9 An Interesting Case of Appendicitis: Perforation—Operation; Recovery. T. W. Parry.

1. **The Cerebral Circulation.**—Russell describes the results of experimental study of the restoration of circulation after the blood supply of the brain has been cut off. He discusses the time limit of the recovery of the brain from arrest of the circulation, the postmortem condition of the brain, reviews the symptoms, and regards the diminution in the blood flow through the brain as the result of increased intracranial tension. His observations, clinical and pathologic, lead him to the conclusion that the fundamental condition underlying the status epilepticus is cerebral anemia.

2. **Saliva and the Transmission of Tubercle.**—Neild and Dunkley have been impressed by the freedom with which the tuberculous patients use their saliva for purposes in no way connected with their digestion, and by the fact that few, if any, tuberculous patients are warned against such uses. In 50 cases of pulmonary tuberculosis, saliva from the tip of the patient's tongue showed tubercle bacilli in 29. Among the practices by which the possible transmission of tubercle bacilli was shown, were licking the finger to pick up the lead of a mechanical pencil, spitting on the hands to use a rake, tennis racket, etc., licking the finger to turn over the pages, spitting on a slate, biting the end of sewing thread. Saliva is often used as a styptic. The nipple is wetted with it to encourage a child to take the breast. Then there are the various methods of using saliva for closing envelopes and affixing stamps. One of the authors has recently met with two cases of lupus of the face, in which there was a definite history of face cleaning with saliva by the pulmonary tuberculous.

5. **Precipitin Reaction in Hydatid Disease.**—Welsh, Chapman and Storey refer to their previous experience of precipitin reaction in hydatid disease, as reported in the *Australasian Medical Gazette*, January, 1908, and abstracted in THE JOURNAL, April 18, 1908, p. 1309. They make a further report, dealing mainly with the interactions of hydatid fluids (a) not derived from the patient whose serum was being tested; (b) of longer standing than those used in the first series, and (c) subjected to various methods of treatment, in order to preserve them in a sterile condition for many years. The conditions of experiment, therefore, were less favorable than in their first series. They state their conclusions as follows:

1. A precipitate was not obtained in any interaction between hydatid fluid and human serum from a patient not invaded by hydatid cysts.

2. Having regard to the long duration and probable irregularity of the interchange of protein molecules between a hydatid cyst and its human host, and having regard also to the possible unsuitability of the hydatid fluid, we must expect a certain number of precipitin tests to fail to give satisfactory precipitate, and this has been the author's experience.

3. In the conditions of a diagnostic precipitin test as above described for patients suspected to harbor hydatid cysts, a negative reaction is inconclusive, but a positive reaction is conclusive of hydatid invasion, and the latter may be obtained in circumstances of clinical importance.

British Medical Journal, London

April 17

10 *Dysmenorrhea. G. E. Herman.
11 Importance of Pain and Hemorrhage as Symptoms of Extra-uterine Gestation. T. W. Eden.
12 Three Recent Cases of Tubal Pregnancy. C. E. Purslow.
13 Surgical Treatment of the Umbilical Cord. J. W. Ballantyne.
14 Chronic Inversion of the Uterus. R. J. Johnstone.
15 Inguinal Hernia of Uterus. R. Parker.
16 Cesarean Section with Unusual Indications. R. C. Bulst.
17 *Tetanus Occurring After Surgical Operations. W. G. Richardson.
18 Fracture of the Thigh in the New-Born. J. L. T. Isbister.

10. **Dysmenorrhea.**—Herman insists that dysmenorrhea is a disease and not a symptom. About one-third of all women menstruate without pain. They have, as a rule, good appetites, sleep soundly, and are not easily tired. They have healthy nervous systems. Before and during menstruation some increase in vascular tension and rise of temperature takes place, and, in those who are ill or weak, this reduces the nervous strength, making them more sensitive to pain, but in most women this pain is slight. In nearly every local disease that causes pain the pain is worse about the time when menstruation begins. This is so in neurasthenics, in various pelvic conditions in nervous diseases, etc. But the pain is not the acute spasm of dysmenorrhea; it is the pain of the other morbid condition rather worse than usual. Herman objects to all such terms as "neurasthenic dysmenorrhea," "menstrual epilepsy," etc., which imply the dependence of the disease on menstruation. He also objects to "obstructive dysmenorrhea," and "membranous dysmenorrhea," contending that the word dysmenorrhea should be restricted to its proper meaning, namely, to denote morbid painful uterine contractions accompanying menstruation. Patients who pass membranes suffer, not because membranes are passed, but because their nervous systems are weak. In the worst cases of dysmenorrhea the patient writhes, perspires, vomits and sometimes faints with the severity of the pain, which is not relieved when the woman lies down, whereas it is relieved when pain is due to inflammation or congestion of dependent parts of the body. Another feature of the pain is its short duration, as compared with the discomfort caused by the monthly congestion. The view that dysmenorrhea depends on a malformation, seems to Herman inconsistent with the clinical experience that in about one-third of the cases the pain begins suddenly after years of painless menstruation. In such cases, the patients often have their own explanation for it, such as mental or physical shock, or strain. In the case of a small fibroid which sets up uterine contractions, we do know the real cause of the dysmenorrhea. The pain of true dysmenorrhea reduces the pain-resisting power of the nervous system; consequently,

reflected pain is felt over the skin supplied with sensory nerves from the eleventh dorsal to the second lumbar segments of the spinal cord. A dysmenorrheic, if touched over the skin of this region when menstruating, immediately winces. Dysmenorrhea has no tendency to spontaneous cure. The only cure, other than medical treatment, is childbearing.

Herman's theory is that dysmenorrhea exists because the center in the spinal cord or in the sympathetic system which should regulate the movements of the genital canal is imperfectly developed. In dysmenorrhea the natural dilatation of the cervix is absent, consequently the contractions of the uterine body are morbidly violent and painful. Herman's experience leads him to believe that when the cervix dilates slowly and with difficulty, dilatation will cure the dysmenorrhea, but when it is easily accomplished it will not. When the pain is actually present, the local application of heat and the use of coal tar analgetics is the treatment. The unfailing cure is to stop menstruation, but this is justifiable by operative methods only in certain instances. Ten grains of guaiacum resin, three times a day, begun a week before menstruation and continued till the usual pain time is passed, will effect a cure in a certain number of cases. The next thing is dilatation of the cervix with metal bougies, with, if the os externum is very small and circular, division of the vaginal cervix. To differentiate this dysmenorrhea from cases in which some pain due to other causes occurs during or is exaggerated by menstruation, will save many fruitless operations. Before advising so grave a measure as oöphorectomy, the great thing is to be sure that the pain and the prostration spring from menstruation and nothing else.

17. Tetanus After Surgical Operation.—Richardson summarizes his observations on twenty-one cases of postoperative tetanus as follows: Hamilton pointed out that there is a group of diseases among sheep, the symptoms of which are closely allied to tetanus and the bacilli of which can not be distinguished from those of tetanus. In these diseases, the bacilli are normal inhabitants of the sheep's intestine, but at certain periods of the year they pass from the lumen of the bowel into the blood, where they become bacteriolyzed, and the liberated toxins give rise to the symptoms of the various diseases. During these seasons the bacilli are found in the peritoneal cavity and in no other part of the body. These diseases are endemic in certain parts of the British Isles. The twenty-one cases of postoperative tetanus have occurred only in those districts in which the tetanic group of sheep diseases is endemic. More than 90 per cent. of the cases of postoperative tetanus followed operations in which the peritoneal cavity had been opened. Bacilli resembling tetanus bacilli have been found in the remnant of catgut used for ligatures in four cases and in the ovarian pedicle in one case, but confirmation of the suspicion that they were tetanus bacilli has not been forthcoming. Richardson suggests that: 1. The disease which we call postoperative tetanus is not tetanus at all, but one of the sheep's diseases. 2. It is not introduced by the catgut. 3. The patient is, at the time of the operation, the host of the bacillus. 4. We must look on these cases of postoperative tetanus as cases of idiopathic tetanus, accepting Hamilton's suggestion that idiopathic tetanus is not true tetanus, as we ordinarily understand the disease. Richardson, however, does not assume that these patients would have developed tetanus had no operation been performed. He would rather account for the sequence of events by supposing that the disturbance aroused by the opening of the peritoneum at the operation was of such a nature as to favor the activity of the bacilli, which, possibly, would have remained dormant had no operation been performed. 5. That the mere opening of the abdomen can affect the interaction of a patient and bacilli already present in the peritoneum, is frequently demonstrated in cases of tuberculous peritonitis, when a small incision without any other interference is followed by immediate improvement of a local condition and ultimate complete recovery. To the suggestion that the ligatures are infected at or before the time of operation, he adduces the fact of a large number of knee-joint operations without any mishap as pointing to the sterility of the gut.

Medical Press and Circular, London

April 14

19 *Duodenal Ulcer: Its Diagnosis and Surgical Treatment. J. Sherren.
20 Prevention of Blindness Due to Ophthalmia Neonatorum. N. B. Harman.
21 Treatment of Varicose Veins of the Lower Limb by Intravenous Injections of Iodin. B. Schlassl.
22 Streptothricosis; with Special Reference to the Etiology of Mycetoma. W. R. Musgrave and M. T. Clegg.

19. Duodenal Ulcer.—Sherren reviews his 13 cases of chronic duodenal ulcer in which he operated before perforation had occurred. He has been struck by the long period during which the patients had had symptoms and in many cases had been treated medically. Passing the symptoms in review it can be said that chronic ulcers situated in the first part of the duodenum can be accurately diagnosed in the majority of cases; that occasionally a gastric ulcer will be found where a duodenal ulcer was expected; that in all cases the principal symptom is pain, coming on a considerable time after a meal, often said to have no relation to food, at other times relieved by taking food, and often waking the patient at night. Vomiting is not a feature of the case unless the condition has led to dilatation of the stomach. It occurred in eleven out of the thirteen cases, but it was not a prominent feature except in the cases he has mentioned. Difficulties arise in the cases in which the ulcer is situated in the second part of the duodenum, or at the junction of the first and second parts. An effort should always be made to diagnose these cases early, and to investigate carefully every "dyspepsia" occurring in men of adult age, so as to avoid perforation. It appears probable that a duodenal ulcer does not heal, except as the result of operation, so that if the condition is diagnosed operation should be undertaken without delay. The prognosis after operation is extremely good. He has traced the after-history of all his patients. One patient died of bronchopneumonia 5 days after operation. At the postmortem examination the anastomosis was perfect and the abdomen normal. Of the other patients, all have lost their symptoms and in only one is there even discomfort. All surgeons report the same results, so that we have in gastroenterostomy a cure for duodenal ulcer which should not be left too long before it is applied.

Clinical Journal, London

April 14

23 Autoinoculation versus Heteroinoculation in Treatment of Established Infection. E. C. Hort.

Australasian Medical Gazette, Sydney

February

24 Midwifery, with Special Reference to Occipito-Posterior Positions, Hemorrhages, Eclampsia, and Extrauterine Pregnancy. W. J. Crago.
25 Axis-Traction Forceps. J. R. Purdy.
26 *Active Immunization Measures of Treatment in Pulmonary Tuberculosis. M. M. Sinclair.
27 Lupus of the Nose Successfully Treated by Injections of Tubercle Bacillus Emulsion. F. Tratman.
28 Pneumothorax: A Recurrent Case. J. Jamieson.
29 Operative Treatment of Oblique Inguinal Hernia. R. S. Bowker.
30 Treatment of Syphilis. W. McMurray.
31 Pediculosis Capitis, especially in Its Relation to Impetigo Contagiosa. A. G. Salter.
32 Wright's Method of Section-Fixing Applied to Central Nervous System. O. Latham.

26. Active Immunization in Pulmonary Tuberculosis.—Sinclair, from a practical study of tuberculin inoculation in a large number of cases, concludes that no process of immunization at present known can displace the rational principles of sanatorium treatment. Experimental and theoretical considerations on immunity both show that properly spaced injections of tuberculin may raise the resistance of the tissues against the disease, but can not produce an absolute immunity. Such increased resistance may be of use (a) for therapeutic purposes during the process of healing; (b) in helping to prevent a recurrence. No constitutional immunizing process is of much use in pulmonary tuberculosis unless it is accompanied by local changes in the direction of (a) absorption of recently formed tubercle wherever possible; (b) the formation of a firm cicatrix around the focus of degenerate tubercle. In the production of a cicatrix around the lesion the local hyperemia reaction produced by the injection of tuberculin is possibly of more value than any constitutional immunity

which the inoculations have as yet been able to produce. So far as can be seen, perfectly good results can be obtained in pulmonary tuberculosis without the help of the opsonic index. In regard to progressive increase of dosage versus the infinitesimal doses recommended by Wright, Sinclair has made it his practice to begin with the latter doses in all cases; but in many obstinate and difficult cases a progressive increase in dosage will still further enhance the results. The suggestions of disaster by Wright and his pupils in these cases are, so far at least as pulmonary tuberculosis is concerned, disproved by the actual results of practice in the hands of competent observers.

Intercolonial Medical Journal of Australasia, Melbourne

February

33 Cleft Palate. R. H. Russell.
34 Four Hundred and Four Cases of Diphtheria at the Infectious Diseases Hospital, Fairfield, Melbourne. C. V. Mackay and R. A. O'Brien.
35 Infraorbital Neuralgia Relieved by the Excision of Meckel's Ganglion. B. Kilvington.
36 Series of Hospital Cases. J. W. Springthorpe.
37 *Some Contents of Blood Plasma and Their Absorbability by Oral Exhibition. D. M. Paton.
38 Mastoiditis with Subdural Abscesses, Followed by Jaundice, Pericarditis and Recovery. J. M. Baxter.
39 Amyotrophic Lateral Sclerosis. F. A. Nyulasy.

37. **Blood Plasma.**—Paton summarizes his article as follows:

1. Blood plasma contains the secretions of the systemic glands.
2. These secretions are necessary to life.
3. Their active principles are extremely stable, are not affected by digestion, and are readily dialyzable.
4. In normal plasma they are present in that proportion and combination which is found necessary for the maintenance of cellular nutrition, integrity, and function, under physiologic conditions.
5. When the animal is naturally refractory, the proportion and combination of these plasma elements are of such a character that they are capable of maintaining cellular nutrition, integrity, and function, in the presence of the infections to which the animal is refractory.
6. From their character for stability, non-digestibility, and dialyzability they are readily absorbed from the digestive tract.
7. Being transferred to the patient unchanged, both in character and combination, they produce in him the same results as those for which they were originally intended in the animal supplying them.

Dublin Journal of Medical Science

April

40 Unusual Case of Lupus Mutilans. W. G. Smith.
41 *Prognosis in Valvular Disease of the Heart. Sir J. F. H. Broadbent.

41. Published in the *Medical Press and Circular*, March 31, 1909.

Journal of Laryngology, Rhinology and Otology, London

April

42 Laryngectomy: Method of Artificial Voice Production. J. W. Gleitsmann.

Annales de Dermatologie et de Syphiligraphie, Paris

March, X, No. 3, pp. 145-224

43 Coal Tar in Treatment of Cutaneous Lesions. (L'emploi de goudron dans les affections cutanées.) Dind.

Lyon Chirurgical, Lyons

April, I, No. 6, pp. 585-720

44 *Forty Cholecystostomies and Cholecystectomies. (Drainage et ablation de la vésicule biliaire.) E. Villard and Nové-Josserand.
45 *Bismuth Paste in Treatment of Fistulas. (Traitement des trajets fistuleux par le mélange bismuthé de E. G. Beck.) G. Nové-Josserand and A. Rendu.
46 *Tubal Pregnancy. (De la grossesse tubaire.) Albertin and Desgouttes. Commenced in No. 5.
47 Diagnosis of Wounds of the Heart and Value of Water-Wheel Sound in Stab Wounds of Chest. (Diagnostic des plaies du cœur et valeur du bruit de moulin dans les plaies pénétrantes de poitrine.) R. Leriche.
48 Forward Dislocation of Elbow with Fractured Inner Condyle. (Luxation du coude en avant avec fracture de l'épitrochlée.) M. Patel.

44. **Drainage of the Gall Bladder.**—The conclusions from 40 operations on the gall bladder are summarized in the statements that cholecystostomy is an excellent operation in case of stones or infections restricted to the gall bladder. In case the biliary passages are infected it is inadequate, giving good results only in the cases of infection low down in the large bile ducts. The mortality in this group of cases was 42.8 per cent. The experiences were unfavorable with cholecystostomy as a means of draining in jaundice from retention or cirrhosis, the immediate mortality being 66 per cent., and 2 other patients succumbed after a brief interval. Cholecystectomy in treatment of gallstone affections should be reserved for cases of obstructed gall bladder and for those whose inflamed and thickened walls are the cause of permanent irritation of the peritoneum and neighboring organs.

45. **Treatment of Fistulas with Bismuth Paste.**—The nine cases in which Beck's method was applied gave disappointing results in some instances, while great benefit was obtained in others. The difference in the results seems to be due to the fact that symptomatic fistulas are not amenable to this method of treatment; it is liable to induce retention and do harm. But in the idiopathic fistulas there is no such objection, and the curative action is liable to be pronounced and definitely effectual.

46. **Tubal Pregnancy.**—In rupture of a tubal pregnancy, Albertin and Desgouttes advise repose, the head being kept low and application of ice to the abdomen, with repeated saline infusion and possibly administration of a few grams of calcium chlorid and measures to keep the patient constantly warm, continuing all this for twenty-four hours. As a rule, the serious symptoms subside and the loss of blood is rapidly repaired. By the third up to the tenth day is the most auspicious time for operating, before the clots have become organized and tough. These principles were applied in 80 cases with 46 laparotomies and no mortality. True hemorrhage requiring immediate intervention is extremely rare, and it is more dangerous to operate during shock than to postpone surgical measures until the patient has rallied. In 34 cases colpotomy alone was applied, and 3 of the patients did not recover. Albertin reiterates that a tubal pregnancy should never be abandoned to a spontaneous course, whatever its age and clinical manifestations. The details of the 80 cases are appended.

Presse Médicale, Paris

April 7, XVII, No. 28, pp. 249-256

49 *Share of Nervous System in the Phenomena of Acute Anaphylaxis. C. Richet.
50 Treatment of Epidemic Cerebrospinal Meningitis. Chambelland.
51 *Treatment of Pulmonary Tuberculosis by Inhalation of Copper Subacetate. (Traitement de la tuberculose pulmonaire par les inhalations de poussières de verdet.) G. Billard.

49. **The Nervous System in Acute Anaphylaxis.**—Richet stated in 1902 that the rapid and extreme reduction of the arterial pressure is the main feature of anaphylaxis, but he maintained then and still declares that this is a secondary phenomenon resulting from the primary action on the nerve centers of the poisons inducing the anaphylaxis. His experiments have never shown that the coagulating power of the blood is much reduced in anaphylaxis, while they have demonstrated beyond question that fluctuations in the blood pressure alone are incapable of producing such severe disturbances as are observed in anaphylaxis.

51. **Treatment of Tuberculosis by Inhalation of Copper Subacetate.**—Billard noticed improvement in the condition of two consumptives after they obtained work in a factory producing copper subacetate. They were employed in packing the verdigris, and soon began to improve and had no further hemorrhages from the lungs, while they regained appetite and weight. The verdigris dust is thick in some of the rooms, but none of the employés seems to notice it, and no coughing is heard in the factory. These and other facts observed led Billard to attribute healing power to the verdigris dust inhaled and he decided to use it in treatment. He has been treating thirty patients systematically in this way since last August and with encouraging results. He orders the patient to buy about 2 pounds of pulverized copper subacetate, as chemically pure as possible. It is poured into a basin and some is taken up on a card and poured back into the basin from a height; this process is repeated again and again and the dust is inhaled as it rises. The verdigris ceases to give off dust in about two weeks, and it is ground over again. Half an hour morning and evening is the general rule for this treatment. In every case in which the patients followed it the cough and expectoration subsided or ceased, while the patients gained in weight and strength and the stethoscope showed a retrogression of

the lesions. The only exceptions to this were in the acute cases with fever; these patients did not seem to be benefited by the treatment.

Semaine Médicale, Paris

April 14, XXIX, No. 15, pp. 169-180

52 Globulin. C. Achard and M. Aynaud.

Berliner klinische Wochenschrift

March 29, XLVI, No. 13, pp. 577-624

53 *Statistical Study of Cancer. (Kleiner Beitrag zur Krebsstatistik.) J. Orth.

54 *Artificial Respiration in Apparent Death from Drowning. (Künstliche Atmung bei Scheintod durch Ertrinken.) E. A. Schäfer.

55 *Treatment of Bronchial Asthma of Nervous Origin. N. v. Jagic.

56 Atypical Typhoid. (Ueber einige Fälle von Typhus.) H. Rosin.

57 *Etiology and Treatment of Coxa Vara in Adolescents. G. Drehmann.

58 *Importance of Serodiagnosis of Syphilis. (Bedeutung der Wassermann'schen Reaktion für die Therapie der Syphilis.) H. Boas.

59 Serum Research in Leprosy. (Ueber Serumuntersuchungen bei Lepra.) C. Brück and E. Gessner.

60 Origin of Central Epithelioma of Lower Jaw. (Entstehung der centralen Epithelialgeschwülste des Unterkiefers.) L. v. Bakay.

61 Production of Whey by Colloidal Precipitation of Milk. (Eine durch colloidale Ausflockung gewonnene Milchmolke.) P. Grosser.

53. **Cancer Statistics.**—Orth compares the reports of the Pathologic Institute at Berlin for the years 1875 to 1908; they show that the number of cadavers in which cancer is found has steadily increased from 4.9 per cent. in 1875 to 14 and 12.2 per cent. in 1906 to 1908. Among the 171 cancers in the last five years there were only 2 of primary cancer of the liver, that is, 0.28 of all the cancers, while the British figures show 50 times as many. He adds that during the last five years only 12 cases of cancer of the male genitalia were encountered and only 2 cases of cancer in the penis—and these in men of 65 and 77—while there were 149 cases of cancer of the uterus or vagina. Uterine cancer occurred in 38.2 per cent. of all the female cases of cancer, while cancer of the penis occurred in only 0.6 per cent. of the male cases of cancer.

54. **Artificial Respiration by the Prone Pressure Method.**—Schafer's method of artificial respiration was described in THE JOURNAL, Sept. 5, 1908, page 801. Although introduced quite recently, it has been widely adopted, and was demonstrated last year at the Chicago session of the American Medical Association.

55. **Adrenalin in Bronchial Asthma.**—Jagic reports five cases to show the remarkable benefit from adrenalin in arresting acute attacks of asthma. No harm was observed even when the adrenalin was injected a number of times. The effect is analogous to that of atropin on the vagus, although the adrenalin acts on the sympathetic.

57. **Coxa Vara.**—Drehmann presents evidence to show that unilateral coxa vara in youths is generally accompanied by abnormal conditions on the other side. He found in three cases that the upper end of the femur was twisted forward on the apparently sound side with atrophy, preparing conditions for coxa vara, although they had not yet become pronounced enough to induce the deformity. It is evident that too great a burden on any part of a skeleton which has not reached full maturity, may cause the bone to bend at the epiphysis. The special attitude assumed in certain work is liable to exaggerate the tendency. In one of his patients the sudden aggravation followed mowing, in another moving a number of heavy tub plants. The site of the bend explains the comparative failure of the ordinary osteotomies, and the benefits of permanent extension or of still more active measures. He has applied a non-operative method for correction of the deformity in two cases with most excellent results, as he describes in detail with illustrations and technic. Under chloroform, the thigh is flexed at a right angle and the adductors are stretched as for operation on a congenital dislocation of the hip; then the leg is extended, the outward rotation corrected, and the leg is immobilized in extreme abduction, extension and slight inward rotation, down to the middle of the calf. The patients are allowed to get up after a few days and are dismissed, but should return for inspection occasionally. After two months the cast is replaced by a shorter one with less abduction, and this after two months with a removable cast reaching to the knee. He commends this treatment as bound to restore almost normal conditions when commenced early, and to induce marked functional improvement in every case.

58. **Serodiagnosis of Syphilis and Its Importance for Treatment.**—Boas has applied the Wassermann test in 1,345 cases and states that positive findings after systematic treatment of syphilis were invariably the precursor of a recurrence. The serum test applied once a month in the first years after infection and resumption of treatment in case of positive findings will certainly, he is convinced, have a marked influence in warding off recurring trouble.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

March 22, XII, No. 4, pp. 129-159

62 *Pathologic Anatomy and Clinical Picture of Gastric Erosions. (Magenerosionen.) C. Berger.

63 *Idiopathic Dilatation of the Colon. (Die Hirschsprung'sche Krankheit.) G. Zesas. Commenced in No. 3.

62. **Gastric Erosions.**—Berger draws the picture of this affection from nineteen articles in the literature. Pain in the stomach, weakness and emaciation are the principal disturbances accompanying the erosions in the stomach, but the pain is never boring or cramp-like as with gastric ulcer, and it seems to extend throughout the whole stomach and is not affected by pressure or change of position. The pain comes on at once after eating, persists for an hour or two and then gradually subsides, but it may persist all the time in some cases, irrespective of the intake of food. There may be intervals free from pain, during which the patient feels quite well, and the pains generally vanish after lavage of the stomach. Frequently there is no appetite and there is often lassitude after eating, gradually subsiding in an hour or two. In certain cases on record vomiting dominated the whole picture and only the microscope revealed the cause of the disturbances. The motor and secretory functions may continue unmodified or may alter with concomitant gastritis. Pariser advises control investigation of the fasting stomach to differentiate erosions from gastric ulcer or a neurosis; it is especially instructive when burning pain throughout the entire stomach, in connection with the meals, is observed with emaciation, especially when the test breakfast has shown normal or subnormal acidity with or without excess of mucus. The course is protracted, with a great tendency to recurrence and there is always danger of hemorrhage from arrosion of some blood vessel. Treatment should be both local and general, lavage of the stomach with a 1 or 2 per thousand solution of silver nitrate, large doses of bismuth and the Lenhartz ulcer diet. He calls this form "Einhorn's disease." Quite opposite is the picture of simple ulceration of the stomach. It comes on abruptly, the first symptom being a serious hemorrhage in the midst of health. The lesion is superficial, but it extends over a broader area than mere erosions. In the intervals between the hemorrhages the patients feel well, with unimpaired appetite, and the stomach is not spontaneously painful or tender on pressure. Differentiation from varices of the stomach is difficult, especially when there is an associated liver affection. Only the most careful investigation and exclusion of alcoholism and syphilis with tests of the liver functioning will differentiate the trouble. Some advocate surgical treatment, but in certain cases that came to autopsy no arroded vessel could be discovered, showing that operative treatment would have had little chance of success. For this condition, also, treatment with the Lenhartz ulcer diet offers the best prospects, accompanied by bismuth, iron and arsenic. This seems to be the only means of controlling this surface bleeding, strengthening the patient and correcting the anemia.

63. **Congenital Dilatation of the Colon.**—Zesas has collected from the literature 197 articles bearing on this subject. In a few cases on record the anomaly did not prove fatal as usual, and the patients survived past 50 in tolerable condition. The best results from operative treatment were obtained in the cases in which the surgeons merely opened the abdomen and

after inspecting conditions sutured it again and applied massage, electricity, etc. It seems wisest, therefore, to commence with these measures after introducing a long tube into the bowel, although Madelung urges the exploratory laparotomy first, as the local measures can be pushed with more confidence once sure of the diagnosis. Nine different methods of surgical intervention have been attempted, resection in 29 cases, colopexy in 9, puncture alone in 10, colostomy in 23, coliplication in 1 and merely an exploratory laparotomy in 20. Good results were obtained in some cases from colopexy, enteroanastomosis or exclusion of the intestine, as also from extensive resection and amputation. Perthes operated on one boy in seven different sittings, first making an artificial anus, then operating on the intestine by suturing transversely the longitudinal incision, on the principle of pyloroplastic operations followed by enteroanastomosis and resection of part of the flexure. Treves in one case resected the entire descending colon and rectum, suturing the transverse colon in the anus.

Deutsche medizinische Wochenschrift, Berlin

April 8, XXXV, No. 14, pp. 609-656

64 Sluggish Metabolism. (Verlangsamung des Stoffwechsels.) R. Staehelin.
65 Problem of Reducing Interchanges in Obesity. (Das Problem der Herabsetzung des Umsatzes bei der Fettsucht.) v. Bergmann.
66 *Serum of Cantharidin Blisters for Biologic Tests. (Verwertung des Inhalts von Vesikatorblasen zu biologischen Untersuchungen.) C. Eisenberg.
67 *Diagnosis of Syphilis by Staining Reaction. (Luesnachweis durch Farbenreaktion.) W. Schürmann.
68 *Familial Jaundice. (Familiärer Ikterus.) R. Rosenfeld.
69 Treatment of Serious Joint Lesions. (Behandlung schwerer Arthritiden.) A. Schawlow.
70 *Results of Suction Apparatus in Treatment of Puerperal Mastitis. O. Jäger.
71 Two Cases of Esophagotomy for Extraction of Tooth Plate. (Zwei Speiseröhrenschnitte zwecks Entfernung künstlicher Gebisse.) R. Burmeister.
72 Devices to Shut Out Sounds and to Improve the Hearing. (Antiphon and Audiphon.) C. Friedmann.

66. **Blister Fluid for Biologic Tests.**—Eisenberg announces that bacteria do not pass into the contents of blisters induced by the aid of cantharidin, but the antibodies pass into them. It is thus possible to determine the specific phagocytic power of the serum by examining the contents of a blister, and this method seems destined to prove useful in research on the problems of passive hyperemia and the general pathology of inflammation. He describes the technic with which he prepares the specimen for microscopic examination and reports some of his more interesting findings.

67. **Staining Technic for Serodiagnosis of Syphilis.**—Schürmann has tried to simplify the serum test for syphilis, believing that the extract of the heart muscle used in the ordinary technic might be reduced to its simpler principles. The idea that lactic acid might be concerned in the test occurred to him and experiments confirmed its importance in the reaction observed with the usual technic. He first reduces the hemoglobin in the serum and then adds a solution of ferric chlorid. In the absence of syphilis the fluid remains limpid, but if the serum is from a syphilitic the fluid turns dark brown and seems to be thicker in consistency. There is always also more or less foaming with syphilitic serum. The reaction is complete in one or two minutes—what happens after that is without diagnostic importance. He has investigated 84 serums by this technic and in each of the 39 cases of certain syphilis the fluid lost its transparency and turned brown, while the fluid remained limpid in the other cases, including 2 cases of scarlet fever, and also with serum from 1 sheep, 2 guinea-pigs and 6 rabbits. The serum is diluted with salt solution, 1 part in 30 or 40, and then the blood pigment is reduced with some oxidizing substance. The reagent is then added in the proportion of 0.5 c.c. to 4 c.c. of the serum dilution. The reagent is a mixture of 0.5 parts phenol, with 0.62 parts of a 5 per cent. solution of ferric chlorid and 34.5 parts distilled water. The reagent must be made up fresh each time.

68. **Familial Jaundice.**—Rosenfeld reviews what has been written on this subject, especially on acholuric hemolytic jaundice occurring in families or inherited and jaundice from malformations of the biliary passages. He then describes in detail a familial form of jaundice, accompanied by disturbances in the liver and spleen, but without malformations. The patients were a sister and two brothers; the father and mother were healthy. The jaundice was not of the hemolytic type, but rather a familial form of Hanot's cirrhosis of the liver of a peculiarly malignant type. There was nothing to indicate syphilis in the antecedents of the family. The jaundice came on at the ages of 8, 18 and 32, respectively, in the different patients and proved fatal in less than a year in the first and within four years in the second case—both of these patients had had scarlet fever in childhood. The sister presents a milder, more chronic type of the same disease. He has found reports of somewhat similar cases by four other writers in the literature; in one of the families described a syphilitic taint was evident.

70. **Suction Treatment of Mastitis.**—Jäger states that at Pfannenstiel's clinic at Kiel during the last four years 44 patients with acute mastitis were treated with cupping apparatus. Abscesses developed in 9 per cent.; he is inclined to attribute this complication to defective technic, the suction being applied too vigorously. Nutritional disturbances are liable to be induced by over-energetic suction, with the formation of an abscess in consequence. The experiences related confirm, he says, the benefits of Bier's suction hyperemia as superior to all other methods of treating acute mastitis if correctly applied, but the slightest excess in intensity soon avenges itself. The germs retain their vitality in the region and it is consequently necessary to keep up the suction hyperemia for a few days after the mastitis has subsided, to ward off recurrence.

Deutsche Zeitschrift für Chirurgie, Leipsic

March, XCVIII, Nos. 2-3, pp. 113-319

73 Indications for Resection of Esophagus. (Indikation zur Resektion des Brustabschnittes der Speiseröhre.) F. Sauerbruch.
74 *Experimental Pericardiectomy and its Possible Therapeutic Application. G. Parlavecchio.
75 Causes of Torsion of the Appendices Epiploicæ. H. Zoepprtz.
76 Retroperitoneal Lipoma. T. Voeckler.
77 Disturbances in Circulation in the Mesentery. (Zirkulationsstörungen im Mesenterialgebiet.) Niederstein.
78 Surgery of Liver and Bile Ducts. (Zur Chirurgie der Leber und der Gallenwege.) A. Jenckel.
79 Mechanism of Fracture of Skull. (Zur Mechanik der Schädelbrüche.) R. Thoma.
80 *Extradural Sarcoma in Cervical Spinal Canal. (Extraduraler Tumor am Halsmarke.) R. Bing and E. Bircher.
81 *Curvature of Spine in Animals and Fowls. (Ueber die Rückgratsverkrümmungen bei Tieren, insbesondere bei unseren Hausvögeln.) F. Härtel.
82 Primary Sarcoma of Ankle Capsule. E. Moser.

74. **Pericardiectomy.**—Parlavecchio states that he has found sixteen cases on record in which autopsy revealed congenital absence of the pericardium or mere rudiments. In none of the cases had there been noticeable disturbance from the lack of the pericardium except possibly in one case with mitral stenosis. Amerio has experimented on rabbits to learn the effects of complete removal of the pericardium which he found feasible and Parlavecchio reports a series of recent experiments on dogs, the results of which confirm the findings of Amerio with rabbits, although pericardiectomy is more dangerous for dogs than for rabbits. The functioning of the diaphragm does not seem to suffer if the phrenic nerve on one side is left intact. It is important to refrain from injuring the auricles and large vessels and even from touching the right wall of the pericardium for fear of injuring the other phrenic nerve or the other pleural cavity. The surgeon may therefore feel justified in removing almost the whole of the pericardium in malignant disease or in chronic pericarditis resisting other measures. If pleuritis results, this is much easier to cure than pericarditis.

80. **Extradural Sarcoma in the Neck.**—Bing and Bircher report the successful removal of a long tumor in the spinal canal which had sent out a large pear-shaped process through an intravertebral foramen. The patient was a banker of 37 and the tumor had caused the Brown-Séquard syndrome but no pain; the mild paresis in the left arm and spastic paresis in the left leg with disturbances in the superficial sensibility suggested a tumor in the left half of the spinal canal. The palpable tumor had at first been taken for an enlarged gland,

but the operation revealed that the tumor was not a gland but a process, protruding through the sixth foramen, from an intradural, soft fibrosarcoma which was compressing the spinal cord from the first thoracic vertebra to the fifth cervical. The intraspinal part was removed at a second operation. The absence of pain was due to the softness of the tumor and its position in the spinal canal which allowed the dural sac to interpose like a water cushion to protect the posterior roots in the region, which also explains the absence of other root symptoms.

81. **Curvature of the Spine in Animals and Fowls.**—Härtel gives a number of illustrations of scoliosis and other forms of curvature in animals and poultry and describes the mechanism of their production. No evidences of trauma could be discovered, and the dorsosacral kyphoscoliosis observed in poultry corresponds in the anatomy and etiology in many respects with scoliosis in man. Curvature of the spine of congenital origin is encountered in all classes of vertebrates.

Fortschritte der Medizin, Leipsic

March 30, XXVII, No. 9, pp. 337-368

83 Injury of Eye by Light and its Prevention. (Die Schädigung des Auges durch Licht und ihre Verhütung.) Birch-Hirschfeld.

Medizinische Klinik, Berlin

April 4, V, No. 14, pp. 491-528

84 *Transient Albuminuria. (Flüchtige Albuminurien.) J. Schreiber.
85 Baincotherapy and Menstruation. S. Gottschalk.
86 Influence of Physical Measures on Antiferment Content of Blood. (Einfluss physikalischer Behandlung auf den Antifermentgehalt im menschlichen Blute.) L. Brieger.
87 *Tuberculin in Diagnosis and Treatment in General Practice. (Ueber die heutige diagnostische und therapeutische Anwendung des Tuberkulin in der Praxis.) O. Roepke.
88 Cutaneous Reaction with "Iron Tuberculin." (Kutanreaktion mit "Eisentuberkulin.") W. Ohm.
89 Serious Toxemia and Metastasis after Roentgen Treatment of a Cutaneous Sarcoma. H. Kanitz.
90 Serum Toxicity and Anaphylaxis. (Serumgiftigkeit und Anaphylaxie.) G. Salus.

84. **Fleeting Albuminuria.**—Schreiber discusses the puzzling fleeting albuminuria occasionally discovered at one examination and vanished by the next, even by the next day. He calls it "fugal albuminuria," by analogy with the word "centrifugal," and describes some typical examples of it to show the possible errors in diagnosis to which it may give rise. It is evidently the result of some interference with the circulation and he has encountered it a number of times as a direct consequence of palpation of the abdomen. He calls attention to this "abdominal-palpatory albuminuria," stating that it occurs only when the epigastrium and mesogastrium are palpated, thus showing that the aorta above the renal arteries feels the effect of the palpating fingers and slight transient albuminuria results.

87. **Tuberculin Treatment in General Practice.**—Roepke expatiates on the diagnostic and therapeutic importance of tuberculin and urges that every uncomplicated afebrile case of pulmonary tuberculosis of the first or second stage should be regarded as indicating a cautious and reactionless course of tuberculin treatment, and that the general practitioner should not hesitate to apply this treatment, not abandoining it to specialists and special institutions.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XX, No. 1, pp. 1-194. Last indexed April 10, p. 1217

91 *Serum Treatment of Hemophilic Hemorrhage. (Der Wert der Serumbehandlung bei Hämophilie auf Grund experimenteller und klinischer Untersuchungen.) E. W. Baum.
92 *Perforation of the Stomach. (Ueber Magenperforation.) J. Schoemaker.
93 *Lesions of the Pancreas with Gallstones. (Ueber Erkrankung des Pankreas unter besonderer Berücksichtigung der bei der Cholelithiasis vorkommenden Pankreatitis chronica.) H. Kehr.
94 *Pericolitis. A. Bittorf.
95 Treatment of Tumors with Roentgen and Radium Rays and Injection of Cholin. R. Werner.
96 Influence of Alkalies on Mouse Carcinoma. (Vergleichende Studien über den Einfluss von Alkalien auf das Mauscarcinom.) Id.

91. **Serum Treatment of Hemophilia.**—Baum reports extensive experimental tests of serum treatment of hemophilic hemorrhage and its application in three clinical cases. In one case the hemorrhage was promptly arrested by the injection of serum after failure of tamponing, adrenalin and the thermocautery. The hemorrhage had persisted for two days, but stopped in a few minutes after a tampon dipped in fresh diphtheria antitoxin had been applied twice. Examination of the blood at the time and later showed normal coagulation; the hemorrhage had evidently been the result of some transient dyscrasia. The serum treatment in the other cases was disappointing; the patients were children known to be hemophilic. The serum treatment seems destined to prove useful in surgery in the cases of sporadic rebellious hemorrhage. This form of hemophilia is of the greatest practical interest for the surgeon as it is unsuspected until the apparently healthy individual presents uncontrollable hemorrhage from some trifling injury or wound. Constitutional bleeders are generally known as such, and surgeons refrain on principle from all operations on them except for vital indications.

92. **Perforation of the Stomach.**—Schoemaker reports 13 cases of perforation of a gastric ulcer in which he operated in from three and one-half hours to ten days. Eleven recovered; one patient operated on after sixteen hours and 3 others after seven to ten days, died. His experience has shown that an ulcer in the stomach may exist without symptoms or with vague signs on the part of the stomach or with a marked syndrome. In all his cases the localization of the trouble depended on whether he could palpate an inflamed region and whether a solid background rendered palpation easier. The symptoms simulated appendicitis in many cases of perforation of the stomach, and if the appendix is found sound, while most of the signs of inflammation are between the ascending colon and the lateral wall of the abdomen, perforation of the stomach should be suspected even although there is nothing else to suggest it. The details of the 13 cases are given. As ulcer patients generally display hyperacidity this explains the comparatively benign course of the perforation in certain cases; the excess of acid protects against trouble to a certain extent.

93. **Pancreatic Affections with Gallstones.**—Kehr devotes 107 pages to reports and critical analysis of 129 cases in which he found pathologic conditions in the pancreas in the course of 520 laparotomies for assumed gallstones and chronic jaundice. In 21 cases the pancreas was the seat of a carcinoma, in 1 of cyst, in 5 of necrosis and in 102 there was chronic pancreatitis. The pancreas was thus found diseased in 24 per cent. of his 520 gallstone cases in the last five years. Examination later gave negative findings to the Cammidge test in the milder cases, showing that the drainage of the hepatic duct or removal of the gall bladder had been followed by the cure of the pancreatitis. He tabulates the findings of the Cammidge test in 40 cases both before and after the operation, urging others to similar research. The findings were positive in 82 per cent. of the cases of chronic pancreatitis. He does not believe in operating for gallstones during a latent phase unless the Cammidge test gives positive findings. As this indicates mischief in the pancreas, it turns the scale if the test still gives positive findings after four weeks of repose, thermophor and dietetic treatment. His experiences show further that the pancreas is secondarily affected in 14 per cent. of all cases of chronic cholecystitis and in 50 per cent. of the cases of stones in the common bile duct and cholangitis. He regards the pancreas as of such importance that morbid conditions here are almost more serious than the gallstone affection itself. Consequently it is wise to seek to heal the inflammatory process in the pancreas by removal of the gallstones, the source of the irritation. Hence he operates even in the mild cases of cholecystitis, in which the patient feels entirely well after it has subsided, if the Cammidge test gives positive findings. He adds in conclusion a list of a number of important works on the pathology and treatment of the pancreas that have appeared during the last five years, including several from THE JOURNAL.

94. **Inflammation Around the Colon.**—Bittorf reviews the history, diagnosis and treatment of pericolitis and sigmoiditis. He has witnessed many spontaneous cures, even large exudates

being sometimes reabsorbed under repose, fluid diet, the ice-bag and systematic laxatives. Absorption may be hastened by application of moist heat. He thinks that coprostasis is the principal factor in the trouble, especially when there are nervous and muscular changes in the intestines predisposing to morbid conditions. In a case described, a girl of 17 complained of abdominal pain and fever for ten days; the sixth day the pain became localized high up in the right side with fetid diarrhea and vomiting by the eighth day. The abdomen was not distended but rather taut. The ascending colon was somewhat unduly resistant, dull and tender; leucocytes 70,000; indican in the urine. Puncture revealed a streptococcus-containing exudate and the patient died on the thirteenth day from the suppurative peritonitis in the region of the ascending colon. The colon was swollen and the mucosa red, but there were no perforations or ulcerations anywhere; the appendix was normal, as also the other organs and no other source for the peritonitis could be detected.

Therapeutische Monatshefte, Berlin

April, XXIII, No. 4, pp. 185-240

97 Improvement of Hearing with Artificial Tympanic Membrane. (Was leistet ein künstliches Trommelfell?) Nadoleczny.
98 Neutral Temperature Point in Baths. (Zur Kenntniss des Indifferenzpunktes bei Kohlensäurebädern und einfachen Wasserbädern.) A. in der Stroth.
99 *Prognosis in Inherited Syphilis. J. Peiser.
100 Diagnosis and Treatment of Glaucoma. Pick.
101 *Diagnosis and Treatment of Tuberculosis of Urinary Passages. (Tuberkulose der Harnwege.) H. Naegeli-Akerblom and P. Vernier.
102 Formaldehyd-Gelatin Capsule. (Ueber experimentelle und Therapeutische Versuche mit Gefoduratkapseln.) W. Thau.
103 *Campaign against Pellagra in Austria. (Die Pellagra in Oesterreich und ihre Bekämpfung als Volkskrankheit.) L. Sofer.

99. **The Prognosis of Inherited Syphilis.**—Peiser has been investigating the after-history of the 101 children with inherited syphilis treated at the Breslau policlinic and children's clinic during the ten years ending in 1906. Seventy-six of the 101 survived the period of infancy and only one-third of these have developed further manifestations of the syphilis and resumption of treatment has failed of success in only 7 cases. With the exception of this small group, the children have developed on the whole as normally as other children of their social standing, so that the prognosis of inherited syphilis under appropriate treatment is by no means so unfavorable as frequently assumed, so far as the general health is concerned. The general condition is recorded as excellent for 39 per cent. of 59 of the children recently examined; fair in 37 per cent., and poor in only 24 per cent.

101. **Treatment of Tuberculosis of the Urinary Passages.**—Akerblom and Vernier state that it is important to remember that albumin up to 1 or 2 gm. is not infrequent in tuberculosis of the urinary passages, but this is not essential albuminuria; it is merely the result of destruction of leucocytes in the pus. The best method for examining the sputum and urine for occult tuberculosis is the Martin-Herman Mons technic. The Martin stain is preceded by the action of a 1 per cent. solution of ammonia carbonate in distilled water. The stain is a 3 per cent. solution of crystal violet in 95 per cent. ethyl alcohol. These fluids are mixed just before using in the proportion of three parts of the first to one part of the stain. This shows up the bacilli when they can not be seen by Ziehl's or other methods. Chemical examination is important, especially the determination of the proportion of urea and chlorids. A starch diet free from chlorids is advisable in case of impermeability of the kidneys with retention of urea. It not only counteracts the tendency to retention of urea and of chlorids, but also has a direct diuretic action. This diet is preferable to an exclusive milk diet, as it is richer in albumin than in chlorids.

103. **Pellagra in Austria and Its Prophylaxis.**—Sofer describes the various measures undertaken by the authorities to combat pellagra in its endemic foci in Austria. At Rovereto a "*pellagrosarium*" has been in operation since 1905 in charge of two physicians; 413 patients were received during the first three years. The patients remained in the institution on an average of 90 days, but sometimes longer. The institution is also a center for postgraduate instruction and for research on pellagra. In Bukowina, with a population of 38,000, 2.9 per cent. have pellagra and there are 17 institutions for supplying them with proper food. Efforts are made to educate the people to substitute other grains for maize; seeds are provided and courses in cooking are given, while the official inspection of the maize is carried out with scrupulous care. The people are encouraged by prizes to raise other cereals and cattle, the aim being to wean them away by various devices from their beloved mush, "polenta." The corn is raised in many localities at an altitude where it never comes to full maturity. Another official prophylactic measure is to erect drying ovens where the corn can be thoroughly dried.

Therapie der Gegenwart, Berlin

April, L, No. 4, pp. 169-216

104 *Principles for Treatment of Obesity. (Grundzüge der Behandlung der Fettleibigkeit.) E. H. Kisch.
105 Tuberculous Origin of Articular Rheumatism. (Bemerkungen zur Aetiologie des tuberkulösen Gelenkrheumatismus.) E. Melchior.
106 Treatment with Portable Apparatus in Modern Orthopedics. R. Pfeiffer.
107 Operative Tendency in Obstetrics. (Ueber die modernen operativen Bestrebungen in der Geburtshilfe.) M. Neu.
108 Subcutaneous Administration of Arsenic. (Zur Methode der subkutanen Arsentherapie.) A. Herzfeld.

104. **Principles for Treatment of Obesity.**—Among the rules for treatment of obesity followed by Kisch is one to the effect that the fatter the organism the lesser amount of albumin required in proportion. In the obesity resulting from too hearty food a man weighing 200 pounds can do well on 1,100 calories, remembering that 1 gm. of albumin, as also of carbohydrates, produces 4.1 calories and 1 gm. of fat 9.1 calories. Kisch does not believe in overloading such patients with bulky salads, apples, potatoes and the like on account of the tendency to dyspepsia. Systematic exercise is important for this form of obesity—Mastfettleibigkeit. The obesity resulting from constitutional causes, congenital or acquired in consequence of some pathologic process, requires different treatment. The aim here should be to improve the blood production and influence the cellular processes. Iron is useful and the diet must be regulated to supply plenty of albumin, while avoiding substances that produce fat. The diet for twenty-four hours should average for the ordinary patient 200 gm. albumin, 12 gm. fat and 100 gm. carbohydrates. The intake of fluid should be regulated by the amount of diuresis. Exercise should be very cautiously taken, in order not to fatigue the easily exhausted heart.

Wiener klinische Wochenschrift, Vienna

April 1, XXII, No. 13, pp. 439-476

109 The Electrocardiogram. C. J. Rothberger.
110 Vaccine Treatment of Acne and the Opsonic Index. G. Scherber.
111 *Experiences with Scopolamin-Morphin-Ether Anesthesia. E. Zadro.
112 Modern Views of Arteriosclerosis and Its Medicinal Treatment. (Der heutige Stand der Lehre von der Arteriosklerose (Atherosklerose) und ihre medikamentöse Behandlung.) J. Wiesel.

111. **Experiences with Scopolamin-Morphin-Ether Anesthesia.**—This communication reports the application of this combined technic in 770 cases at von Eiselsberg's clinic at Vienna, the conclusions being that the method has a number of advantages both for patient and surgeon. Chief among them are the absence of the stage of agitation and the smaller quantities of the anesthetic required. This technic also reduces the tendency to postoperative vomiting and to postoperative complications on the part of the lungs. In combination with Schleich's infiltration anesthesia, the scopolamin-morphin technic renders excellent service in operations for goiter. From forty-five minutes to an hour before the operation the scopolamin is injected into the right and the morphin into the left arm. After this interval Billroth's mixture is given until the stage of tolerance is reached, and the anesthesia is then continued with ether, or chloroform is used alone. To insure that the scopolamin solution does not resolve into its extremely toxic constituents, apoatropin or atroszin, he has a fresh solution made every second day. Vomiting was observed in 19.2 per cent. of the patients, generally after they commenced to sip water, tea or fruit juice; if the patients could resist yielding

to thirst, vomiting would be still more infrequent. The majority did not vomit until twelve hours or more after the anesthesia, which is important in prophylaxis of postoperative pneumonia. This combined technic is certainly, Zadro remarks, an important advance in prevention of postoperative complications on the part of the respiratory apparatus. During the last eight years pneumonia occurred as a postoperative complication in 170 out of 5,031 operations at the clinic, that is, in about 3.3 per cent.—nearly three times more frequent in men than in women. In the 770 cases, however, in which this scopolamin technic was used, postoperative pneumonia occurred in only 8 cases, that is, in 0.9 per cent. Comparing 785 other cases with pure ether or chloroform anesthesia and postoperative pneumonia in 4.8 per cent., with 579 cases in which the scopolamin technic was used, with only 0.8 per cent. postoperative pneumonia, shows the improvement in this respect realized with this technic with the same operators, operative technic and during the same months, and approximately the same set of patients. No evil effects from the scopolamin technic were observed in a single instance. The pulse was accelerated, with moderate increase in temperature, lasting for three or four days, after some operations for goiter, but under no other conditions. In one case an overdose of scopolamin was given, 0.06 gm. being injected instead of the desired 0.0005 gm., and symptoms of intoxication followed, some of the symptoms persisting for three days before complete recovery. The experiences with a patient with exophthalmic goiter and another with pronounced neurasthenia confirm the assertions of others that this technic had better be avoided with persons inclined to neurasthenia, hysteria and exophthalmic goiter. In the young and robust the doses injected have merely a sedative effect, while they throw the elderly and the feeble into a deep sleep. Among the operations performed under the scopolamin-morphin and local anesthesia were 5 resections of the stomach, 4 gastroenterostomies, 2 gastrostomies and 1 colostomy. In one case the upper jaw was resected with only 5 gm. of the Billroth mixture after the scopolamin-morphin. In 2 other cases a few whiffs of ether were required to complete a resection of the stomach. All these patients bore the operation quietly, without pain, and next day had no remembrance of the intervention. The secretion-reducing property of the scopolamin is a further obvious advantage. The dose of morphin is 0.01 gm. (3/16 grain) in operations for goiter.

Zeitschrift für klinische Medizin, Berlin

LXVII, Nos. 5-6, pp. 345-526. Last indexed March 27, p. 1073

113 *Pathology of the Nervous System Controlling the Vegetative Functions. (Zur Pathologie des vegetativen Nervensystems.) H. Eppinger and L. Hess.
114 Metabolism of Chlorids and Weight in Scarlet Fever. (Chlorstoffwechsel und Körpergewicht im Scharlach.) O. Grüner and B. Schick.
115 Reciprocal Action of Glands with an Internal Secretion. II. (Wechselwirkung der Drüsen mit innerer Sekretion.) H. Eppinger, W. Falta and C. Rudinger.
116 Autolysins in Blood in Infectious Diseases. (Autolysine im Blute bei Infektionskrankheiten.) H. Frank.
117 Appetite and Loss of Appetite. W. Sternberg.
118 *Influence of Phosphorus on the Metabolism of Lime in Rachitic and Healthy Children. (Der Phosphor in der Therapie der Rachitis.) J. A. Schabad.
119 Pathologic-Anatomic Study of Adams-Stokes Syndrome. M. Nagayo.
120 Irregularity of the Heart Action in Infectious Diseases. (Atrioventrikuläre Automatie im Verlauf der Infektionskrankheiten.) A. Belski.
121 Chyluria and Diabetes. A. Magnus-Levy.

113. **Pathology of Nervous System Controlling the Vegetative Functions.**—This communication issues from von Noorden's clinic at Vienna and reports research along lines suggested by the fact that certain substances injected into a vein or under the skin induce the same effect as isolated electric excitation of the nerves involved. Among these substances are adrenalin, atropin and pilocarpin, and the fact was confirmed that the effects induced by adrenalin are the result of action on the sympathetic system, while those induced by pilocarpin are by the mediation of the vagus, and that these two nerve systems have an antagonistic action. Glycosuria, for instance, is the expression of irritation of the sympathetic and of paralysis of the vagus, as also dilatation of the pupil, stomach and cardia, while contraction of the pupil, stomach and cardia is the result of paralysis of the sympathetic and stimulation of the vagus. When either of these nerve systems is especially sensitive, the individual reacts to the above stimuli in proportion, and those persons who react vigorously to injection of atropin and pilocarpin are not susceptible to the action of adrenalin, while those who display marked signs of irritation of the sympathetic after administration of adrenalin prove refractory to pilocarpin and atropin. The practical conclusion of the research is that atropin and pilocarpin may be expected to act with great energy, and adrenalin not at all, in cases of hyperacidity, bronchial asthma, many cases of gastric ulcer, tuberculous processes, etc. On the other hand, adrenalin induces a powerful reaction, and atropin and pilocarpin none at all, in comparison, in many cases of diabetes, nervous affections, such as tabes and multiple sclerosis, orthostatic albuminuria and carcinoma. The research is being continued to study the action of these substances on all the visceral functions, and especially to decide whether the action is diffuse throughout the nerve system involved or localized to certain parts of it.

118. **Phosphorus in Rachitis.**—Schabad's extensive experience and tests have shown that phosphorus does not seem to influence the lime metabolism in healthy children, but that it unmistakably promotes the absorption of lime in rachitis.

Zentralblatt für Chirurgie, Leipsic

March 27, XXXVI, No. 13, pp. 449-480

122 *Treatment of Habitual Dislocation of Patella. (Neues operatives Verfahren in der Behandlung der habituellen Kniescheibenverrenkung.) R. Dalla Vedova.
123 *Successful Removal of Thrombus from Inferior Thyroid Vein. (Entfernung eines 8 cm. langen Geschwulstthrombus aus der Vena thyreoidea inferior.) P. Meisel.

122. **Treatment of Habitual Dislocation of the Patella.**—Dalla Vedova's technic aims to remove the shriveled section of the lateral part of the ligamentary apparatus of the patella and remedy the insufficiency of the anterior ligament of the patella by a plastic restoration of the weak sections of the ligaments. He works through two incisions, one on each side of the patella, drawing through and fastening a strip of tendon reenforced by a strip of periosteum, the partial transplantation of the ligament of the patella forming an accessory ligament which takes the place of the insufficient anterior ligament and prevents any further displacement of the bone. He gives an illustration of the technic and reports its application in a clinical case with durable results.

123. **Removal of Thrombus from Inferior Thyroid Vein.**—Meisel states that he has encountered four cases of tumor in the thyroid gland which sent out several long processes between and into veins, etc., but these processes always lay free in the veins and could be easily pulled out. In a recent case, which he describes in detail, the adenocarcinoma in the thyroid was readily enucleated until it held only by a long process running down into the inferior thyroid vein. He applied a ligature to the vein which his assistant was told to draw tight at the word, and, utilizing the phase of expiration, lifting up the wall of the vein with pincers in the left hand, he cut the vein around with scissors in the right and was able to draw out a process 8 cm. long. It grew wider toward the tip where it was fully 2 cm. in diameter. There was no aspiration of air and the removal of the tumor thrombus was complete in less than a minute; the patient, a woman of 42, had been raised as erect as possible to prevent aspiration of air. In the four cases in which this tumor thrombosis was observed the growths were comparatively so benign that paralysis of the recurrent nerve had not yet developed.

Zentralblatt für Gynäkologie, Leipsic

March 27, XXXIII, No. 13, pp. 441-472

124 Inverted Method of Expulsion of Uterine Decidua in Tubal Pregnancy. (Ueber den invertierten Ausstossungsmodus der Decidua uterina bei Tubargravidität.) P. Buche.
125 *Suprarenal Treatment of Osteomalacia. (Adrenalin bei Knochenerweichung Osteomalakie.) B. Engländer.

125. **Disappointing Suprarenal Treatment of Osteomalacia.**—Engländer reports from Cracow six cases of osteomalacia in women between 31 and 45, following a comparatively recent pregnancy. They were given a subcutaneous injection every day or second day of 0.5 c.c. of a 1 per thousand solution, rep-

resenting 0.0045 gm. of adrenalin. This treatment was kept up for from 35 to 101 days with indifferent results. Only slight improvement was manifest, the pains and tremor persisting more or less in every case. There was marked reaction to the suprarenal preparation in some cases, rapid, deep breathing, acceleration of the pulse, palpitations, sweating, tremor, headache, vertigo, weakness and dilatation of one or both pupils, showing that these injections should never be made unless there is opportunity for constant medical supervision of the patient.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 18, XXX, No. 33, pp. 345-352

126 *Biologic Research on Gastric Carcinoma. S. Livierato.

March 23, No. 35, pp. 369-376

127 Technic of Spinal Anesthesia. (Pratica della rachistovalinizzazione.) G. Cocci.

126. **Fixation of Complement in Gastric Cancer.**—Livierato has applied the hemolytic test with extracts of sarcomas and carcinomas to the gastric secretions. The findings were positive in eight persons with certain gastric cancer, while they were invariably negative in persons free from cancer. The cancer extract supplies the antigen and the presence of cancer products in the stomach secretions entails the specific hemolysis in the biologic test.

Policlinico, Rome

March 21, XVI, Practical Section, No. 12, pp. 357-388

128 Therapeutic Action of Electric Colloidal Silver. (Osservazioni sull' azione terapeutica dell'argento colloidale elettrico.) D. Buttino.

129 Treatment of Incomplete Abortion. G. Massini. Commenced in No. 11.

March, Surgical Section, No. 3, pp. 97-144

130 Retropharyngeal Tumors. (Dei tumori parafaringei.) L. Fiori.

131 Anatomic and Histologic Changes in Deforming Arthritis of the Knee. (Artrite deformante del ginocchio.) A. Ando.

132 *Primary Tuberculosis of Abdominal Muscles. (Tuberculosi primitiva dei muscoli striati.) L. Bobbio.

133 *Sterilization of Catgut. E. Bertarelli and L. Bocchia.

132. **Primary Tuberculosis of the Abdominal Muscles.**—Bobbio's patient was a letter carrier of 35 who began to experience a dull pain in the right abdominal wall, which began to swell. There was no fever at any time and the general health did not seem to suffer. The tumor was removed after a few months as a cold abscess, being resected into sound tissue, with prompt recovery of the patient. Five years later the same train of symptoms and abscess formation was observed on the left side, and the lesion was likewise resected into sound tissue with prompt recovery. Not a trace of tuberculosis could be detected elsewhere, and the patient seems in robust health. Guinea-pigs inoculated with the pus developed tuberculosis in each instance, although no tubercle bacilli could be cultivated from it. Bobbio summarizes from the literature nine cases of localization of primary tuberculosis in the abdominal muscles, presenting his own case as the tenth on record. Tubercle bacilli were found in the pus in only one case. The main difficulty in diagnosing is to distinguish the tuberculous from a syphilitic gumma.

133. **Sterilization of Catgut.**—Bertarelli and Bocchia give the details of the seventeen different methods of sterilizing catgut most in vogue and relate comparative tests with them. The conclusions are all in favor of Claudius' iodin technic as the most effectual means of sterilization. Next to this is the alcohol at 120 C. technic and then the Van Ketel and then Lister's last method. Catgut prepared by these methods retains all its desirable properties. The catgut keeps best, they say, in an alcoholic solution of corrosive sublimate with essential oils.

Riforma Medica, Naples

March 22, XXV, No. 12, pp. 309-336

134 Tumors at Base of Brain. (I tumori della base dell'encefalo.) G. Rummo. Commenced in No. 10.

135 *Downward Displacement of the Heart. (Cardioptosi Malattia di Rummo.) N. Serio-Basile.

135. **Cardioptosis.**—Basile discusses the downward displacement of the heart from weakening and relaxation of its supports without changes in its size or in the pressure in chest and abdomen. In a case described the only symptoms were irregularity of the pulse and bradycardia. The patient was a girl of seven who had entered the hospital on account of acute bronchitis. The subjective and functional disturbances differ in various cases according to the condition of the heart muscle.

Hygiea, Stockholm

February, LXXI, No. 2, pp. 99-192

136 Treatment of Syphilis with Atoxyl and Arsacetin. E. Welander.

137 Indications for Mastoid Operation in Acute Suppurative Otitis Media. (Om indikationerna för uppmejsling af processus mastoideus vid akuta suppurationer i mellanörat.) C. B. Lagerlöf.

138 *Anastomosis of Bile Ducts with the Jejunum. (En ny operation på gallvägarna.) R. Dahl.

139 *Psychologic Expert Testimony in Trial of Witches at Stockholm, 1676. (Urban Hjärne och häxprocesserna i Stockholm, 1676.) B. Gadelius.

138. **Anastomosis Between Hepatic Duct and Jejunum.**—Dahl performed an operation of this kind on a woman of 61 who had been troubled for eighteen years with gallstones and had been operated on four months before with a resulting fistula which refused to heal. None of the usual technics was applicable in this case, as the stump of the hepatic duct was too short to be implanted in the duodenum, even if it had been advisable to expose the patient to the danger of infection from this part of the intestines. The research of Jundell and others has shown that conditions are much more favorable for implantation of a bile duct in the jejunum; this stretch of bowel is comparatively sterile, as its contents are passed along quickly and it is soon left empty. This ensures an empty loop through which the bile runs in a continuous stream if the gall bladder has been removed, reducing the danger of infection of the bile to the minimum. He thinks that the jejunum would be preferable even for anastomosis with the gall bladder and for all such operations on any of the bile ducts. The results were most excellent in the case reported, the patient being free from all disturbances and attending to her household duties. He has not been able to find records of any choledocho-jejunostomy or hepatico-jejunostomy in the accessible literature, but mentions that Monprofit recently suggested the feasibility of such an operation. Even at the discussion of the subject of operations on the biliary passages at the late International Surgical Congress, none of the members reported having attempted an anastomosis with the jejunum.

139. **Psychologic Expert Testimony at Trials of Alleged Witches at Stockholm in 1676.**—Gadelius reviews the history of Urban Hjärne, a prominent Swedish physician of the seventeenth century, who was the first to utilize in scientific therapeutics the mineral waters of Sweden. At the age of 35 he was called on as the psychologic expert to testify in one of the most peculiar criminal suits in the history of jurisprudence in that country, the witchcraft cases at Stockholm in 1676. His full report has been preserved and is cited. Trials of witches occurred again at Stockholm in 1704, 1720 and even as late as 1763, notwithstanding Hjärne's masterly testimony in regard to the delusions causing accusations of witchcraft.

Norsk Magazin for Lægvidenskaben, Christiania

April, LXX, No. 4, pp. 297-416

140 *Tumors in Nerves and Multiple Neurofibromatosis. (v. Recklinghausen's sygdom.) F. Harbitz. Commenced in No. 2.

141 *The Cutaneous Tuberculin Reaction in Children. E. Hellesen.

142 *Idiopathic Hematuria. (Essential hæmaturi.) N. N. Paus.

140. **Multiple Neurofibromatosis.**—In this concluding installment of his monograph Harbitz adds other case histories and autopsy findings, bringing the list of cases to thirty-four, with his conclusions from this experience. It seems evident, he thinks, that multiple neurofibromatosis is dependent on some anomaly in development, a malformation in the peripheral nervous system. This is demonstrated by its frequent hereditary and congenital character, its development early in life, the primary multiplicity of the lesions—a sure sign of a congenital anomaly—and the frequent coincidence of other congenital anomalies, malformations or deformities. The distribution of the patches of pigment does not seem to correspond to nervous influences and is probably likewise dependent on some anomaly in development. No complete spontaneous cure of a typical case of this disease is on record,

although some of the tumors have occasionally subsided. In one of his cases the symptoms of multiple neurofibromatosis were accompanied by a carcinoma in the ovary with carcinomatosis of the pleura and sarcomatous infiltration of the root of the mesentery. The patient was a woman in the fifties. In another case, the neurofibromatosis was accompanied by a carcinoma of the larynx. In another case a man of 35, now 70, presented numerous nodules which were diagnosed as sarcomatous, but all the nodules gradually subsided in the course of two years, although patches of pigment have developed since. Harbitz is inclined to regard the case as one of mild neurofibromatosis. Ten of the thirteen personal cases reported were in males. The affection did not develop in some until late in life, showing a remarkably long latency; in others it appeared at 6, 7, 9, or at puberty, in others not until after 40. He reiterates that external influences have nothing to do with the first appearance of the affection, and but little effect on its course later, although new tumors may develop at the site of traumas. Intercurrent infections and intoxications seem to display a greater influence, as also periods of physiologic stress, as at puberty, the menopause, during pregnancy and lactation. The tumors seldom require extirpation unless they grow extremely large or ulcerate. There was no local recurrence in his cases in which some tumors were removed on this account, and there was no recurrence when the excessive growth of the elephantiasis was removed more or less completely. In one such case the growth seemed to be arrested by partial excision. The pure multiple neurofibromas without other symptoms of von Recklinghausen's disease respond variously to operative intervention: in some cases they recur again and again after extirpation and in others the affection seems to be arrested, as in two of the cases reported. In other cases the recurrence assumes a malignant character; this seems to be peculiarly liable to be the case with a plexiform neuroma. If operative intervention becomes necessary some advise resecting the nerve for a long stretch, and, if sarcoma is already apparent, to make a high amputation of the limb. The previous installments were reviewed in THE JOURNAL, April 17 and 24, pages 1304 and 1372.

141. **Cutaneous Tuberculin Reaction in Children.**—Hellesen concludes from the findings of the cutaneous tuberculin test applied to 418 children that it is an important aid in diagnosis at this age, although the fact that it does not indicate whether the tuberculous process is active or latent detracts materially from its significance. This is of less account in the younger children, as the process has scarcely had time to become latent in children under the age of 2, for example. The reaction was positive in 97 per cent. of the certain cases of tuberculosis, in 59 per cent. of the suspects, and in 23 per cent. of 301 children free from signs of the disease. Negative findings were always confirmed by negative findings at autopsy, and *vice versa*.

142. **Idiopathic Hematuria.**—Paus presents the history of essential hematuria and reports a case in which the kidney seemed to be entirely normal when exposed, but the danger of recurrence of the hemorrhages was considered sufficient reason for removing the kidney, which was done. Nothing was found, even under the microscope, to explain the hematuria, which must be classed as idiopathic in this case. Cases are on record in which the hematuria recurred after nephrotomy, and secondary nephrectomy became necessary. Rovsing and others regard an exploratory operation as imperatively necessary.

Ugeskrift for Læger, Copenhagen

March 11, LXXI, No. 10, pp. 247-268

143 Treatment of Tuberculous Spondylitis. (Om Behandlingen af Spondylitis tuberculosa.) E. Nyrop.

March 25, No. 12, pp. 297-334

144 *Quantitative "Tuberculin Titer" Test. (Om kvantitativ Udforelse af den kutane Tuberkulinreaktion og om Tuberkulintiterens kliniske Betydning.) V. Ellermann and A. Erlandsen.

145 Otogenous Meningitis and its Operative Treatment. H. Mygind. Commenced in No. 11.

144. **Quantitative "Tuberculin Titer" Test.**—The announcement of Ellermann and Erlandsen in regard to the advantages of applying the cutaneous tuberculin test with a series of drops representing a graded concentration of the tuberculin, was mentioned in these columns, April 17, page 1300. They cleanse the skin of the thigh with ether and then scarify the skin with a vaccination lancet, each scratch about 1 or 2 cm. long and at intervals of 3 cm., striving to make the scratches as uniform as possible. The first scratch is left for the control, on the next is placed a drop of the weakest concentration of the tuberculin, and so on in turn to the strongest concentration, using a 1 per cent., 2 per cent., 5 per cent., 10, 25 and 50 per cent. solution in turn. The faintest trace of infiltration is accepted as the lowest limit of the reaction. If the zero point is with the 1 per cent. dilution, then the dilution is 1/100, and the "titer," the standard of titration, of the case in question is 100. If the zero point is with the 25 per cent. dilution, then the dilution is 25/100, and the "tuberculin titer" of the case in question is 25/100 or ¼. Two minutes after the drops have been applied to the scratches the region is dried and the whole covered with a layer of sterile cotton, held in place with strips of adhesive plaster. The reaction visible at the end of forty-eight hours is the criterion. The findings are extremely instructive, as in the cases with active tuberculous processes even the weakest concentration causes a reaction, while in those with latent processes only the strongest concentration produces manifest results and the non-tuberculous present no reaction whatever. The results of the test reclassify the cases, many of the clinical non-tuberculous having to pass into the active group, as also some of the supposed latent cases. The "titer" method has also enabled them to standardize tuberculins, and the simple technic for this purpose will certainly prove of great benefit in the clinic. In this connection they make a strong plea in favor of international standardization of tuberculin. The findings of the test on 100 persons are tabulated under several headings, both in this article and in the German translation previously reviewed.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PRACTICAL MEDICINE SERIES. Edited by Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Vol. I., GENERAL MEDICINE. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Cloth. Pp. 463, with illustrations. Price, $1.50. Vol. II. GENERAL SURGERY. Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in Northwestern University, Chicago. Cloth. Pp. 617, with illustrations. Price, $2. Series 1909. Chicago: The Year-Book Publishers.

A TEXT-BOOK OF SPECIAL PATHOLOGY. By J. Martin Beattie, M.A., M.D., Professor of Pathology and Bacteriology, University of Sheffield, and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P., Lecturer on Pathologic Bacteriology in the University of Edinburgh. Cloth. Pp. 509, with illustrations. Price, $5. Philadelphia: P. Blakiston's Son & Co., 1909.

CATHOLIC CHURCHMEN IN SCIENCE. Second Series. By James J. Walsh, M.D., Ph.D., LL.D., Dean and Professor of the History of Medicine at Fordham University School of Medicine. Cloth. Pp. 228, with illustrations. Price, $1 net. Philadelphia: American Ecclesiastical Review, The Dolphin Press, 1909.

HUMAN PHYSIOLOGY. An Elementary Text-Book of Anatomy, Physiology and Hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Cloth. Pp. 362, with illustrations. Price, 80 cts. Yonkers-on-Hudson, New York: World Book Co., 1909.

MANUAL OF MILITARY HYGIENE for the Military Services of the United States. By Valery Havard, M.D., Colonel, Medical Corps, United States Army. Cloth. Pp. 481, with illustrations. Price, $4. New York: William Wood & Co., 1909.

THE GENERAL CHARACTERS OF THE PROTEINS. By S. B. Schryver, Ph.D., D.Sc., Lecturer on Physiological Chemistry, University College, London. Cloth. Pp. 86. Price, 80 cts. New York: Longmans, Green & Co., 1909.

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